

KEY:

— STUDY AREA

SCALE
0 1750
FEET



NORMANDEAU ASSOCIATES
ENVIRONMENTAL CONSULTANTS
3450 Schuylkill Road Spring City, PA 19475-1124

FIGURE 1. Study Area Location and Physical Features Map

OSRAM SYLVANIA Ecological Assessment Area

Source: USGS Antrim, PA Quad, 1986
USGS Keeneyville, PA Quad, 1983

DATE:	1/10/99	DRAWN BY:	SGS
JOB NO:	16467	CHECKED BY:	KRM
DWG NO:	16467001	SCALE:	AS SHOWN

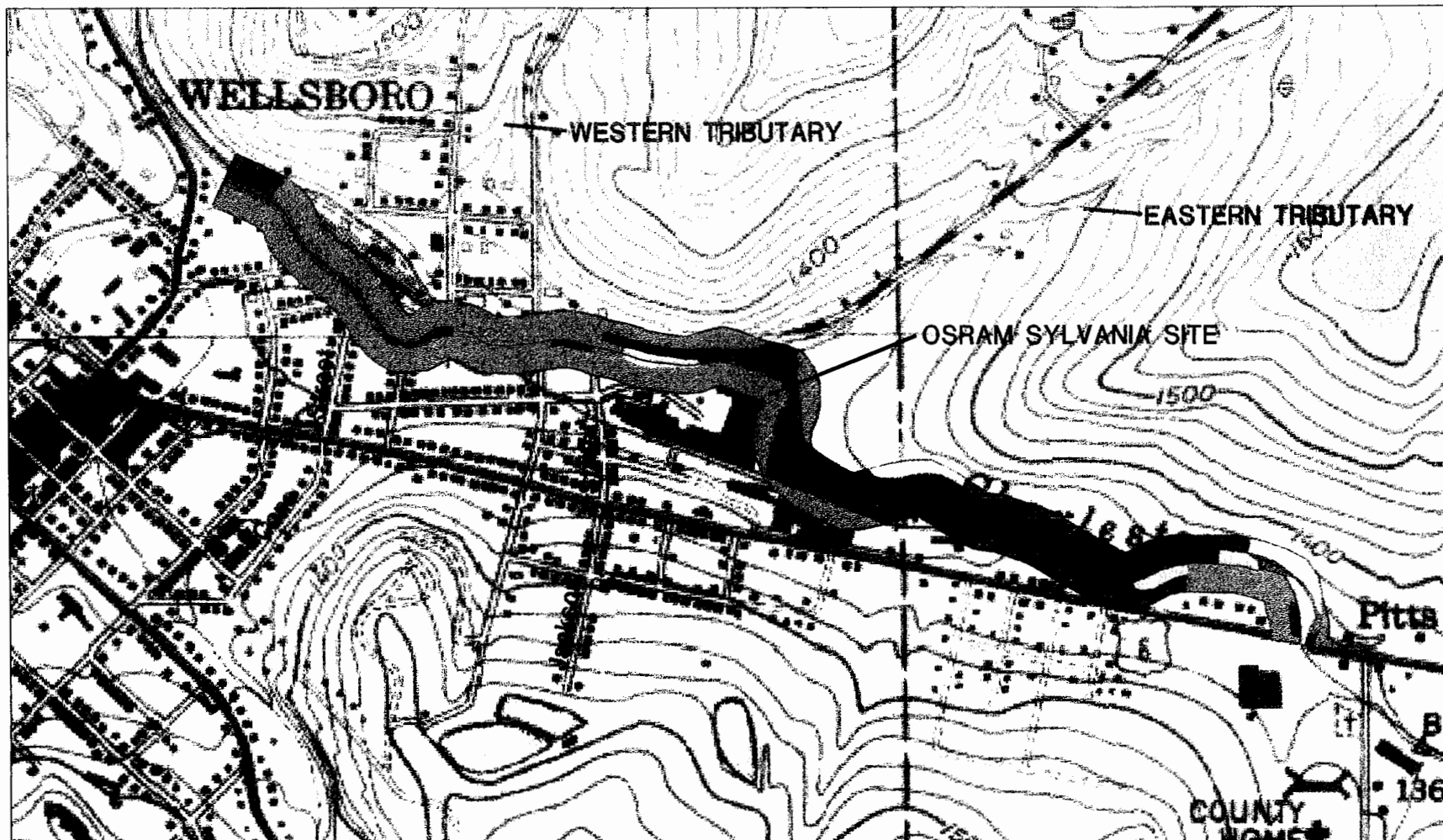


NORMANDEAU ASSOCIATES
ENVIRONMENTAL CONSULTANTS
 450 Johnson Road
 Littleton, Colorado 80120








FIGURE 1 Soil Survey Map

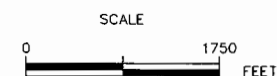
OSRAM SYLVANIA Environmental Assessment Study

United States Geological Survey, 1984



KEY:

- | | | | |
|--|---|---|---|
|  Cropland |  Forest |  Palustrine emergent wetland |  Tree/shrubs |
|  Developed Land |  Old Field |  Palustrine forested wetland | |



NORMANDEAU ASSOCIATES
ENVIRONMENTAL CONSULTANTS
 3450 Schuylkill Road Spring City, PA 19475-1124

FIGURE 3. Ecological Map

OSRAM SYLVANIA Ecological Assessment Area

Source: USGS Antrim, PA Quad, 1986
 USGS Keeneyville, PA Quad, 1983

DATE:	1/12/99	DRAWN:	
JOB NO:	16467	CHECKED:	
DWG NO:	16467002	SCALE:	

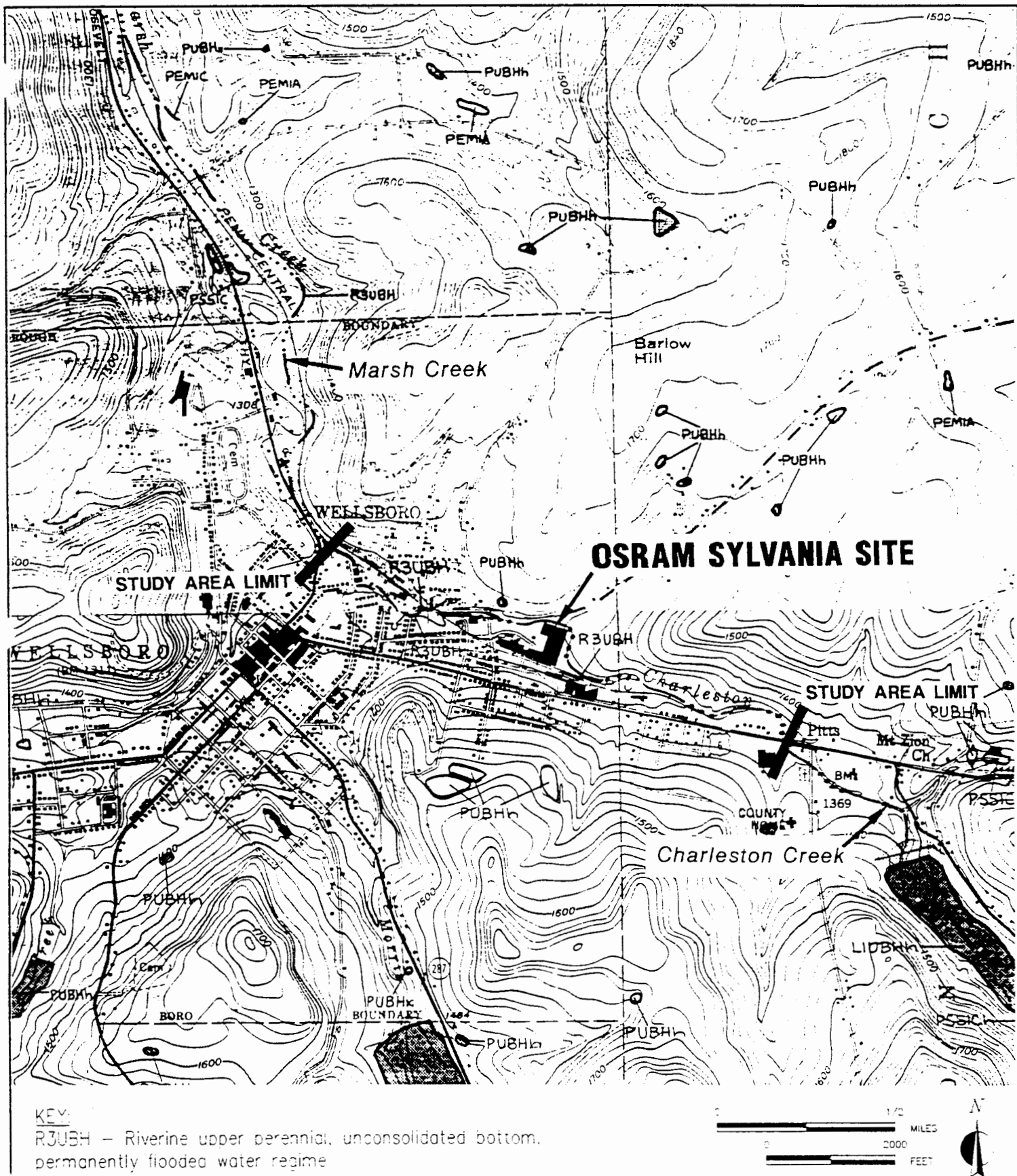


FIGURE 4. National Wetlands Inventory Map

OSRAM SYLVANIA Ecological Assessment Study

Source: USFWS NWI Antrim, PA Quad, 1983

USFWS NWI Keeneville, PA Quad, 1983



NORMANDEAU ASSOCIATES
ENVIRONMENTAL CONSULTANTS
 3450 Schuylkill Road Spring City, PA 19475-1124

OSRAM SYLVANIA Products, Inc.
Ecological Assessment
Table 1
Indicator Status Key

Rating	Frequency Found in Wetlands(%)
OBL = obligate	> 99
FACW = facultative wetlands	67 to 99
FAC = facultative	34 to 66
FACU = facultative upland	1 to 33
NL, UPL = not listed, nonwetlands	< 1

(A "+" symbol indicates a frequency nearer the upper limit of the range; conversely, a "-" symbol indicates a frequency near the lower limit of the range.)

Source: U.S. Fish and Wildlife Service

OSRAM SYLVANIA Products, Inc.

Ecological Assessment

Table 2

Fish Collected from the Charleston Creek Study Area

Scientific Name	Common Name	Charleston Creek			East Tributary		
		Total	Percent	Relative Abundance	Total	Percent	Relative Abundance
Salmoniformes							
Esocidae							
Esox niger	chain pickerel	2	0.2	rare			
Cypriniformes							
Cyprinidae							
Campostoma anomalum	central stoneroller	106	11.2	common			
Luxilus cornutus	common shiner	47	5.0	uncommon			
Pimephales notatus	bluntnose minnow	7	0.7	rare			
Rhinichthys atratulus	blacknose dace	86	9.1	uncommon			
Rhinichthys cataractae	longnose dace	15	1.6	uncommon			
Semotilus atromaculatus	creek chub	348	36.8	common			
Semotilus corporalis	fallfish	224	23.7	common			
Catostomidae							
Catostomus commersoni	white sucker	63	6.7	uncommon			
Perciformes							
Centrarchidae							
Lepomis gibbosus	pumpkinseed sunfish	39	4.1	uncommon			
Micropterus salmoides	largemouth bass	3	0.3	rare			
Pomoxis nigromaculatus	black crappie	2	0.2	rare			
Percidae							
Etheostoma olmstedii	tessalated darter	4	0.4	rare			
Total Species		13	100.0		0		
Total Specimens		946			0		

Notes:

- 1) rare = < 1.0 percent common = 10.1 to 50.0 percent
 uncommon = 1.0 to 10.0 percent abundant = > 50.0 percent

2) Length ranges (millimeters) by species:

chain pickerel	150 - 222	white sucker	45 - 215
central stoneroller	50 - 100	pumpkinseed sunfish	55 - 109
common shiner	50 - 150	largemouth bass	111 - 151
bluntnose minnow	50 - 85	black crappie	105 - 179
blacknose dace	39 - 60	tessalated darter	50 - 75
longnose dace	40 - 65		
creek chub	40 - 235		
fallfish	118 - 245		

3) No fish present in east or west tributaries to Charleston Creek due to lack of flow.

4) Sample dates: 19, 20 October 1998

5) Procedure: Eight foot block seine (1/4 inch mesh)

OSRAM SYLVANIA Products, Inc.

Ecological Assessment

Table 3

Benthic Macroinvertebrates Collected from the Charleston Creek Study Area

Scientific Name	Common Name	Charleston Creek			East Tributary		
		Total	Percent	Relative Abundance	Total	Percent	Relative Abundance
Nematoda	roundworms	1	0.2	rare			
Tricladida							
Planariidae	flat worms	5	1.1	uncommon			
Arhynchobdellida							
Erpobdellidae	leeches	2	0.4	rare			
Lumbricida							
Lumbricidae	earthworms	1	0.2	rare			
Lumbriculida							
Lumbriculidae	earthworms	2	0.4	rare			
Tubificida							
Tubificidae	tubeworms	124	26.3	common	6	23.1	common
Basommatophora							
Physidae	pouch snails	3	0.6	rare			
Amphipoda							
Gammaridae	scuds	6	1.3	uncommon			
Decapoda							
Astacidae	crayfish	4	0.8	rare			
Isopoda							
Asellidae	sowbugs	74	15.7	common			
Hydrachnidia							
Hydrachnidae	water mites	3	0.6	rare			
Ephemeroptera							
Ephemereallidae	mayflies	2	0.4	rare			
Odonata							
Aeschnidae	dragonflies	1	0.2	rare			
Calopterygidae	damselflies	1	0.2	rare			
Plecoptera							
Perlidae	stoneflies	7	1.5	uncommon			
Hemiptera							
Rhagionidae	broad shouldered water bugs	12	2.5	uncommon			
Megaloptera							
Sialidae	fishflies	3	0.6	rare			
Trichoptera							
Hydropsychidae	caddisflies	132	28.0	common			
Philopotamidae	caddisflies	1	0.2	rare			
Coleoptera							
Dytiscidae	diving beetles				10	38.5	common
Elmidae	rifle beetles	25	5.3	uncommon			
Psephenidae	water penny	5	1.1	uncommon			
Diptera							
Chironomidae	midges	48	10.2	common	6	23.1	common
Dolichopodidae	long-legged flies				1	3.8	uncommon
Empididae	dance flies	2	0.4	rare			
Tabanidae	deer flies				2	7.7	uncommon
Tipulidae	crane flies	8	1.7	uncommon	1	3.8	uncommon
Total Families		24	100.0		6	100	
Total Specimens		472			26	(sample matrix processed in entirety)	

Notes:

- 1) rare = < 1.0 percent common = 10.1 to 50.0 percent
uncommon = 1.0 to 10.0 percent abundant = > 50.0 percent
- 2) No sample collected from a second (west) tributary to Charleston Creek due to lack of flow and restricted access.
- 3) Sample dates: 19, 20 October 1998
- 4) Procedure: Four 100 specimen subsamples (US EPA RBP II) from Charleston Creek and one from the tributary (0.595 mesh)

OSRAM SYLVANIA Products, Inc.
Ecological Assessment
Table 4
Plant Species Observed in the Charleston Creek Study Area

Scientific Name	Common Name	Indicator Status ¹
<u>Trees</u>		
<i>Acer negundo</i>	box-elder	FAC+
<i>Acer rubrum</i>	red maple	FAC
<i>Acer saccharum</i>	sugar maple	FACU-
<i>Betula papyrifera</i>	paper birch	FACU
<i>Crataegus</i> spp.	hawthorn spp.	--
<i>Fraxinus americana</i>	white ash	FACU
<i>Picea abies</i>	Norway spruce	UPL
<i>Pinus sylvestris</i>	scotch pine	UPL
<i>Populus tremula</i>	quaking aspen	FACU
<i>Prunus serotina</i>	black cherry	FACU
<i>Robinia pseudoacacia</i>	black locust	FACU-
<i>Salix</i> spp.	willow spp.	FAC-OBL
<i>Ulmus rubra</i>	slippery elm	FAC
<u>Shrubs</u>		
<i>Alnus incana</i>	speckled alder	FACW
<i>Ligustrum vulgare</i>	common privet	FACU
<i>Lonicera tartarica</i>	bush honeysuckle	FACU
<i>Rhus typhina</i>	staghorn sumac	UPL
<i>Rosa multiflora</i>	multiflora rose	FACU
<i>Rubus occidentalis</i>	common blackberry	UPL
<i>Sambucus canadensis</i>	American elderberry	FACW

OSRAM SYLVANIA Products, Inc.

Ecological Assessment

Table 4

Plant Species Observed in the Charleston Creek Study Area
(continued)

Scientific Name	Common Name	Indicator Status ¹
<u>Herbaceous</u>		
<i>Aster novae-angliae</i>	New England aster	FACW-
<i>Aster pilosus</i>	white heath aster	UPL
<i>Aster puniceous</i>	swamp aster	OBL
<i>Aster simplex</i>	panicked aster	FACW
<i>Brassica nigra</i>	black mustard	UPL
<i>Carex</i> spp.	sedges	FAC-OBL
<i>Centaurea maculosa</i>	knapweed	UPL
<i>Chrysanthemum leucanthemum</i>	oxeye daisy	UPL
<i>Cicuta maculata</i>	water hemlock	OBL
<i>Collinsonia canadensis</i>	horse balm	FAC+
<i>Dactylis glomerata</i>	orchard grass	FACU
<i>Daucus carota</i>	Queen Anne's lace	UPL
<i>Dipsacus sylvestris</i>	teasel	FAC
<i>Epilobium coloratum</i>	willow-herb	OBL
<i>Eupatorium perfoliatum</i>	boneset	FACW+
<i>Euthamia graminifolia</i>	grassleaved goldenrod	FAC
<i>Geranium robertianum</i>	herb robert	UPL
<i>Geum canadense</i>	white avens	FACU
<i>Glechoma hederacea</i>	gill-over-the-ground	FACU
<i>Hesperis matronalis</i>	dames rocket	FACU
<i>Impatiens capensis</i>	jewelweed	FACW
<i>Lysimachia nummularia</i>	moneywort	OBL
<i>Malva moshata</i>	musk mallow	UPL
<i>Melilotus alba</i>	white sweet clover	FACU-
<i>Myosotis scorpiodes</i>	forget-me-not	OBL
<i>Oenothera biennis</i>	evening primrose	FACU-
<i>Phalaris arundinacea</i>	reed canary grass	FACW+
<i>Phleum pratense</i>	timothy grass	FACU
<i>Plantago lanceolata</i>	English plantain	UPL
<i>Pilea pumila</i>	clearweed	FACW
<i>Polygonum sagittatum</i>	arrow-leaf tearthumb	OBL
<i>Ranunculus septentrionalis</i>	swamp buttercup	OBL

OSRAM SYLVANIA Products, Inc.
Ecological Assessment
Table 4
Plant Species Observed in the Charleston Creek Study Area
(continued)

Scientific Name	Common Name	Indicator Status ¹
<u>Herbaceous</u> <i>Sedum</i> spp.	stonecrop	FACU-UPL
<i>Setaria glauca</i>	orange bristle grass	FAC
<i>Solidago canadensis</i>	Canada goldenrod	FACU
<i>Solidago gigantea</i>	giant goldenrod	FACW
<i>Solidago rugosa</i>	wrinkle-leaved goldenrod	FAC
<i>Trifolium pratense</i>	red clover	FACU-
<i>Verbascum thapsus</i>	common mullein	UPL
<i>Verbena hastata</i>	blue vervain	FACW+
<i>Veronica americana</i>	American brooklime	OBL

¹National List of Plant Species That Occur In Wetlands Region 1 - Northeast

²No Indicator Status

OSRAM SYLVANIA Products, Inc.
Ecological Assessment
Table 5
Wildlife Observed in the Charleston Creek Study Area

Scientific Name	Common Name
<i>Ardea herodias</i>	great blue heron
<i>Corvus brachyrhynchos</i>	common crow
<i>Cyanocitta cristata</i>	blue jay
<i>Dendrocopos pubescens</i>	downy woodpecker
<i>Dendrocopos villosus</i>	hairy woodpecker
<i>Marmota monax</i>	woodchuck
<i>Megaceryle alcyon</i>	belted kingfisher
<i>Odocoileus virginianus</i>	white tail deer
<i>Parus atricapillus</i>	black-capped chickadee
<i>Richmondena cardinalis</i>	cardinal
<i>Sciurus carolinensis</i>	Eastern gray squirrel
<i>Spizella arborea</i>	tree sparrow
<i>Tamias striatus</i>	Eastern chipmunk
<i>Tamiasciurus hudsonicus</i>	red squirrel

Normandeau Associates, Inc.
RMC Environmental Services Division
3450 Schuylkill Road
Spring City, PA 19475-1124
(610) 948-4700
(610) 948-4752 (Fax)

NORMANDEAU ASSOCIATES

16 December 1998

Mr. Dale Krysinski
Killam Associates
100 Allegheny Drive
Warrendale, PA 15086-7565

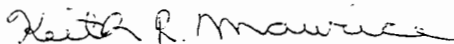
Subject: Threatened and endangered species
OSRAM-SYLVANIA Site
Normandeau Project No. 16467.000

Dear Dale:

The attached correspondence from the Pennsylvania Department of Conservation and Natural Resources (DCNR), Pennsylvania Game Commission (PGC), and Pennsylvania Fish and Boat Commission (PFBC) indicate that there are no records of occurrences of endangered or threatened species of plants, birds, mammals, fish, reptiles, amphibians, or aquatic invertebrates in the vicinity of the OSRAM-SYLVANIA site. The PFBC response also covers Normandeau's entire Charleston Creek study area.

Please contact me if you have any questions or need additional information.

Sincerely,



Keith R. Maurice
Project Biologist

bsm
Enclosures: Attachments

cc: Rick Sugatt

KRM(dir)/16467-dk.tes/bsm/12-16-98

Bedford, NH, Corporate
Richmond, CA
Plymouth, MA

Yarmouth, ME
Ypsilanti, MI
Hampton, NH

Lakewood, NJ
Peekskill, NY
Drumore, PA

Spring City, PA
New Ellenton, SC
Brattleboro, VT

Normandeau Associates, Inc.
RMC Environmental Services Division
3450 Schuylkill Road
Spring City, PA 19475-1124
(610) 948-4700
(610) 948-4752 (Fax)

NORMANDEAU ASSOCIATES

28 October 1998

Ms. Jean Brennan
Department of Conservation and Natural Resources
Bureau of Forest Advisory Services
P.O. Box 8552
Harrisburg, PA 17105-8552

SUBJECT: Ostram-Sylvania Site and Charleston Creek
Normandeau Project No. 16467.000

Dear Ms. Brennan:

Normandeau Associates is conducting an ecological assessment of the Ostram-Sylvania site and a 6,300-foot section of Charleston Creek. The study area extends from the confluence of Charleston and Marsh Creeks in the Borough of Wellsboro, Tioga County to where Charleston Creek crosses U.S. Route 6 in Charleston Township, as shown on the attached figures. The study area also includes a 300-foot buffer along each side of the creek. The western limit of the study area occurs at 0.5 inches north and 6.4 inches west on the Kennyville, PA USGS quadrangle map and the eastern limit of the study area occurs at 21.8 inches north and 3.0 inches west on the Antrim, PA map.

Please conduct a search of the Pennsylvania Natural Diversity Inventory database for current or historical records of rare, threatened, or endangered state or federally designated plant and animal species.

Thank you for your time and consideration.

Sincerely,



Keith R. Maurice
Project Biologist

bsm
Enclosures

KRM(dir)/16467000.km1/bsm/10-28-98

Bedford, NH, Corporate
Richmond, CA
Plymouth, MA

Yarmouth, ME
Ypsilanti, MI
Hampton, NH

Lakewood, NJ
Peekskill, NY
Drumore, PA

Spring City, PA
New Ellenton, SC
Brattleboro, VT



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Pennsylvania Department of Conservation and Natural Resources

Rachel Carson State Office Building
P.O. Box 8552
Harrisburg, PA 17105-8552
October 30, 1998

717-787-3444
fax 717-783-5109

Bureau of Forestry

Keith Maurice
Normandeau Associates, Inc.
3450 Schuylkill Road
Spring City, PA 19475

Re: Pennsylvania Natural Diversity Inventory Review of Osram-Sylvania Site at Charlestown Creek,
Borough of Wellsboro, Tioga County, PA. **PER No.:007005**

Dear Mr. Maurice:

In response to your request on October 28, 1998 the Pennsylvania Natural Diversity Inventory (PNDI) information system was used to gather information regarding the presence of resources of special concern within the referenced site. PNDI records indicate no occurrences of **plant** species of special concern within the project area, therefore we do not anticipate any impact on endangered, threatened, or rare plant species at this location.

Because of the close proximity of the project to *Ammodramus savannarum*, Grasshopper sparrow, our office recommends that you contact **Denver McDowell** of the Pennsylvania Game Commission (717) **787-5529** for recommendations on potential impact on endangered animals in the area.

Pennsylvania Game Commission
Bureau of Wildlife Management
2001 Elmerton Avenue
Harrisburg, PA 17110-9797

This response represents the most up-to-date summary of the PNDI data files and is applicable for one year. However, an absence of recorded information does not necessarily imply actual conditions on site. A field survey of any site may reveal previously unreported populations. Should project plans change or additional information on listed or proposed species become available this determination may be reconsidered.

PNDI is a site specific information system which describes significant natural resources of Pennsylvania. This system includes data descriptive of plant and animal species of special concern, exemplary natural communities and unique geological features. PNDI is a cooperative project of the

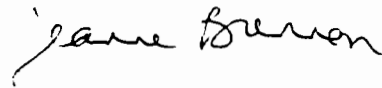
Keith Maurice

October 20, 1998

Department of Conservation and Natural Resources, The Nature Conservancy and the Western Pennsylvania Conservancy.

Legal authority for Pennsylvania's biological resources resides with three administrative agencies. The enclosure titled PNDI Management Agencies, outlines which species groups are managed by these agencies. If information provided by the PNDI system is to be published in any form, the Inventory should be informed at the outset and credited as the source. Please phone this office if you have questions concerning this response or the PNDI system.

Sincerely,

A handwritten signature in cursive script, appearing to read "Jeanne Brennan".

Jeanne Brennan
Environmental Review Specialist
Pennsylvania Natural Diversity Inventory

cc: Denver McDowell- PA Game Commission

RECEIVED DEC 11 1998



COMMONWEALTH OF PENNSYLVANIA

PENNSYLVANIA GAME COMMISSION

2001 ELMERTON AVENUE
HARRISBURG, PA 17110-9797

ADMINISTRATIVE BUREAUS:

ADMINISTRATION	717-787-5670
AUTOMOTIVE AND	
PROCUREMENT DIVISION	717-787-6594
LICENSE DIVISION	717-787-2084
PERSONNEL DIVISION	717-787-7836
WILDLIFE MANAGEMENT	717-787-5529
INFORMATION & EDUCATION	717-787-6286
LAW ENFORCEMENT	717-787-5740
LAND MANAGEMENT	717-787-6818
REAL ESTATE DIVISION	717-787-6568
MANAGEMENT INFORMATION SYSTEMS	717-787-4076

December 10, 1998

Mr. Keith Maurice
Normandeau Associates, Inc.
3450 Schuylkill Road
Spring City, PA 19475

In re: Environmental impacts
Wellsboro Borough
Tioga County, PA

Dear Mr. Maurice:

This is in response to your FAX dated December 8, 1998 regarding potential impacts to the grasshopper sparrow (*Ammodramus savannarum*) by the proposed project.

Our office review shows no impacts should occur to the grasshopper sparrow by the construction of the proposed project. In addition, no endangered or threatened bird or mammal species are known to occur within the proposed project boundaries. Should project plans extend beyond the present study area, or if additional information becomes available on endangered or threatened species of birds or mammals, this review may be reconsidered.

This reply relates only to endangered and threatened species of birds or mammals, but does not address other concerns of the Pennsylvania Game Commission. If an on-site field investigation determines the project may impact critical and unique wildlife habitat such as wetlands, you may be requested to conduct additional surveys.

If you have any questions, please contact me at (717) 783-5957.

Very truly yours,

Anthony S. Ross
Wildlife Impact Review Coordinator
Division of Environmental
Planning and Habitat Protection
Bureau of Land Management

tr

Normandeau Associates, Inc.
RMC Environmental Services Division
3450 Schuylkill Road
Spring City, PA 19475-1124
(610) 948-4700
(610) 948-4752 (Fax)

NORMANDEAU ASSOCIATES

24 November 1998

Mr. Andrew L. Shiels
Endangered Species Coordinator
Pennsylvania Fish and Boat Commission
450 Robinson Lane
Bellefonte, PA 16823

SUBJECT: Ostram-Sylvania Site and Charleston Creek
Normandeau Project No. 16467.000

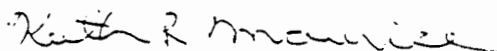
Dear Mr. Shiels:

Normandeau Associates is conducting an ecological assessment of the Ostram-Sylvania site and a 6,300-foot section of Charleston Creek. The study area extends from the confluence of Charleston and Marsh Creeks in the Borough of Wellsboro, Tioga County to where Charleston Creek crosses U.S. Route 6 in Charleston Township, as shown on the attached figure. The study area also includes a 300-foot buffer along each side of the creek. The western limit of the study area occurs at 0.5 inches north and 6.4 inches west on the Kennyville, PA USGS quadrangle map and the eastern limit of the study area occurs at 21.8 inches north and 3.0 inches west on the Antrim, PA map. The approximate project center occurs at 22.5 inches north and 4.8 inches west on the Antrim map.

Please conduct a search of the Pennsylvania Fish and Boat Commission database for current or historical records of rare, threatened, or endangered state or federally designated reptiles, amphibians, fishes, and aquatic invertebrates within the study area.

Thank you for your time and consideration.

Sincerely,



Keith R. Maurice
Project Biologist

bsm
Enclosures

KRM(dlr)/16467shi.krm/11-24-98

Bedford, NH, Corporate
Richmond, CA
Plymouth, MA

Yarmouth, ME
Ypsilanti, MI
Hampton, NH

Lakewood, NJ
Peekskill, NY
Drumore, PA

Spring City, PA
New Ellenton, SC
Brattleboro, VT

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Delano R. Graff, Director
(814) 359-5154
FAX: (814) 359-5153

Richard A. Snyder, Chief
(814) 359-5110
FAX: (814) 359-5153

IN REPLY REFER TO
PNDI# 3130

COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA FISH & BOAT COMMISSION
450 Robinson Lane
Bellefonte, PA 16823-9620

December 3, 1998

NORMANDEAU ASSOCIATES, INC.
Keith R. Maurice
3450 Schuylkill Road
Spring City, PA 19475-1124

Dear Mr. Maurice:

**RE: Environmental Assessment
Osram-Sylvania Site and Charleston Creek
Normandeau Project No. 16467.000
Borough of Wellsboro, Tioga County, Pennsylvania**

I have examined the map accompanying your recent correspondence which shows the location for the proposed above referenced project.

Presently, none of the fishes, amphibians or reptiles we list as endangered or threatened are known to occur at or in the immediate vicinity of this study area.

To allow faster processing of PNDI reviews in the future, we are requesting that the attached form be completed and returned to this office together with other relevant project information. Please make copies of the attached form and use with all future environmental assessment requests. If you have received, and in fact are using the new form, disregard the above request. Please note that the PFBC conducts PNDI reviews **only for reptiles, amphibians, fishes, and aquatic invertebrates**. Reviews concerning other natural resources must be submitted to other appropriate agencies. Thank you in advance for your cooperation.

Sincerely,

A handwritten signature in cursive script, reading "Andrew L. Shiels".

Andrew L. Shiels
Nongame and Endangered Species Unit

CU/csk

Encl. (1)

RECEIVED JAN 27 1999



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Pennsylvania Field Office
315 South Allen Street, Suite 322
State College, Pennsylvania 16801-4850



January 25, 1999

Mr. Keith R. Maurice
Normandeau Associates, Inc.
RMC Environmental Services Division
3450 Schuylkill Road
Spring City, PA 19475-1124

Dear Mr. Maurice:

This responds to your letter of January 4, 1999, requesting information about federally listed and proposed endangered and threatened species within the ecological assessment study area on the Ostram-Sylvania site located in Tioga County, Pennsylvania. The following comments are provided pursuant to the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) to ensure the protection of endangered and threatened species.

Except for occasional transient species, no federally listed or proposed threatened or endangered species under our jurisdiction are known to occur within the project impact area. Therefore, no Biological Assessment or further Section 7 consultation under the Endangered Species Act will be required with the Fish and Wildlife Service. Should project plans change, or if additional information on listed or proposed species becomes available, this determination may be reconsidered. A compilation of certain federal status species in Pennsylvania is enclosed for your information.

This response relates only to endangered or threatened species under our jurisdiction based on an office review of the proposed project's location. No field inspection of the project area has been conducted by this office. Consequently, this letter is not to be construed as addressing potential Service concerns under the Fish and Wildlife Coordination Act or other authorities.

Requests for information regarding State-listed endangered or threatened species should be directed to the Pennsylvania Game Commission (birds and mammals), the Pennsylvania Fish and Boat Commission (fish, reptiles, amphibians and aquatic invertebrates), and the Pennsylvania Department of Conservation and Natural Resources (plants).

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FEB 11 1999

KILLAM ASSOCIATES
C.A. DIVISION

Please contact Michael McCarthy of my staff at 814-234-4090 if you have any questions or require further assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "David Densmore", followed by a long horizontal line.

David Densmore
Supervisor

Enclosure

FEDERALLY LISTED SPECIES THAT NO LONGER OCCUR IN PENNSYLVANIA

<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>	<u>STATUS**</u>	<u>FORMER DISTRIBUTION</u>
<u>MAMMALS</u>			
Delmarva Peninsula fox squirrel	<i>Sciurus niger cinereus</i>	E	mature forests of southeastern PA (Delaware and Chester Co.)
Eastern cougar	<i>Felis concolor cougar</i>	E	state-wide
Grey wolf	<i>Canis lupus</i>	E	state-wide
<u>MOLLUSKS</u>			
Dwarf wedge mussel*	<i>Alasmidonta heterodon</i>	E	Delaware River drainage
Fanshell*	<i>Cyprogenia stegaria</i>	E	Ohio River drainage
Orange pimpleback*	<i>Plethobasus striatus</i>	E	Ohio River drainage
Pink mucket pearly mussel*	<i>Lampsilis abrupta</i>	E	Ohio River drainage
Ring pink mussel*	<i>Obovaria retusa</i>	E	Ohio River drainage
Rough pigtoe*	<i>Pleurobema plenum</i>	E	Ohio River drainage
<u>INSECTS</u>			
American burying beetle	<i>Nicrophorus americanus</i>	E	state-wide
Karner blue butterfly	<i>Lycaeides melissa samuelis</i>	E	pine barrens, oak savannas (wild lupine habitat) (Wayne Co.)
Northeastern beach tiger beetle	<i>Cicindela dorsalis dorsalis</i>	T	along large rivers in southeastern PA
<u>PLANTS</u>			
Eastern prairie fringed orchid	<i>Platanthera leucophaea</i>	T	wet prairies, bogs (Crawford Co.)
Sensitive joint-vetch	<i>Aeschynomene virginica</i>	T	freshwater tidal marshes of Delaware river (Delaware and Philadelphia Co.)
Virginia spiraea*	<i>Spiraea virginiana</i>	T	along Youghiogheny River (Fayette Co.)
Smooth coneflower	<i>Echinacea laevigata</i>	E	serpentine barrens (Lancaster Co.)

* It is possible that remnant populations of some of these species (indicated with an *) may still occur in Pennsylvania, however, there have been no confirmed sightings of these species for over 70 years.

** E = Endangered, T = Threatened

The following is a partial list of additional species that no longer occur in Pennsylvania: moose, bison, lynx, wolverine, passenger pigeon, Bachman's sparrow, greater prairie-chicken, olive-sided flycatcher, Bewick's wren, eastern tiger salamander, blue pike, butterfly mussel, Diana fritillary butterfly, precious underwing moth, deertoë mussel, marbled underwing moth, cobblestone tiger beetle, mountain clubmoss, crested yellow orchid, red milkweed, American barberry, small white lady's-slipper, etc.

**FEDERALLY LISTED, PROPOSED AND CANDIDATE SPECIES
(in Pennsylvania)**

<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>	<u>STATUS*</u>	<u>DISTRIBUTION</u>
<u>FISHES</u>			
Shortnose sturgeon**	<i>Acipenser brevirostrum</i>	E	Delaware River and other Atlantic coastal waters
<u>REPTILES & AMPHIBIANS</u>			
Bog turtle	<i>Clemmys muhlenbergii</i>	T	Current - Adams, Berks, Bucks, Chester, Cumberland, Delaware, Franklin, Lancaster, Lebanon, Lehigh, Monroe, Montgomery, Northampton and York Counties. Historic - Crawford, Mercer and Philadelphia Counties
<u>BIRDS</u>			
Bald eagle	<i>Haliaeetus leucocephalus</i>	T	Suitable habitats across the state. Recent nesting in Butler, Crawford, Dauphin, Erie, Forest, Lancaster, Mercer, Northumberland, Pike, Tioga, Venango, Warren and York Counties. Wintering concentrations occur in association with ice-free sections of rivers, lakes and reservoirs, including the Delaware River.
Peregrine falcon (American)	<i>Falco peregrinus anatum</i>	E	Recent nesting in and around Philadelphia and Pittsburgh (Allegheny, Delaware, Philadelphia and Bucks Counties).
Piping plover	<i>Charadrius melodus</i>	E	Presque Isle (Erie County). Migratory. No nesting in Pennsylvania since mid-1950s.
<u>MAMMALS</u>			
Indiana bat	<i>Myotis sodalis</i>	E	Summer range: unknown. Winter hibernacula: Blair, Mifflin and Luzerne Counties.
<u>MOLLUSKS</u>			
Clubshell mussel	<i>Pleurobema clava</i>	E	French Creek and Allegheny River watersheds; Clarion, Crawford, Erie, Forest, Mercer, Venango and Warren Counties
Northern riffleshell	<i>Epioblasma torulosa rangiana</i>	E	French Creek and Allegheny River watersheds; Clarion, Crawford, Erie, Forest, Mercer, Venango and Warren Counties
<u>PLANTS</u>			
Northeastern bulrush	<i>Scirpus ancistrochaetus</i>	E	Current - Adams, Bedford, Blair, Carbon, Centre, Clinton, Cumberland, Dauphin, Franklin, Huntingdon, Lackawanna, Lehigh, Lycoming, Mifflin, Monroe, Perry, Snyder and Union Counties. Historic - Northampton County
Small-whorled pogonia	<i>Isotria medeoloides</i>	T	Current - Centre and Venango Counties. Historic - Berks, Chester, Greene, Monroe, Montgomery and Philadelphia Counties

* E = Endangered, T = Threatened, PE = Proposed Endangered, PT = Proposed Threatened, C = Candidate

Revised 6/12/98

** Shortnose sturgeon is under the jurisdiction of the National Marine Fisheries Service

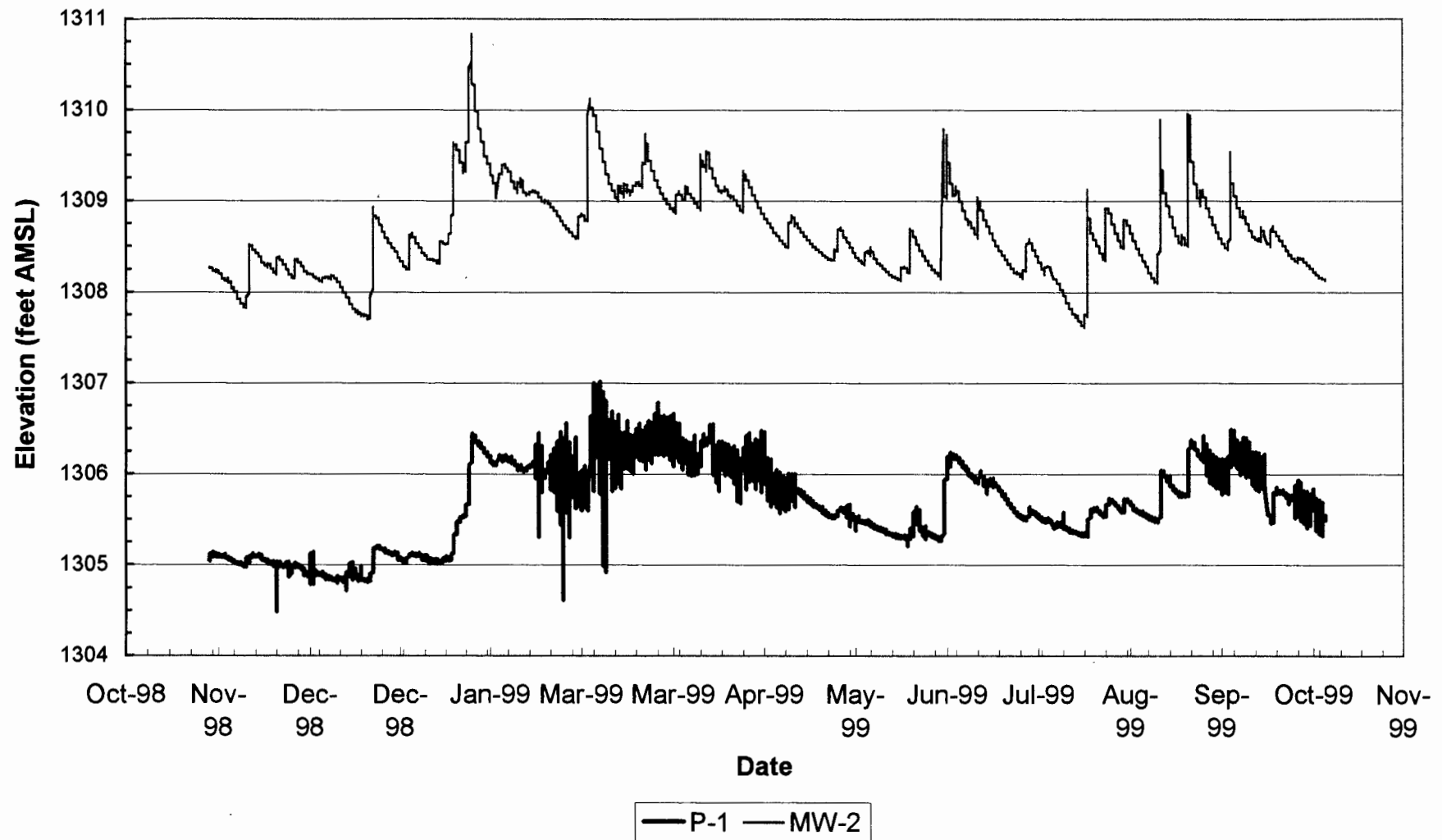
ECOLOGICAL ASSESSMENT REFERENCES

1. Anderson, James R., Ernest E. Hardy, John T. Roach, and Richard E. Witmer. 1976. A Land Use and Land Cover Classification System for Use with Remote Sensor Data. Geological Survey Professional Paper 964. U.S. Government Printing Office, Washington, DC.
2. Cowardin, L.M., V. Carter, F.C. Golet, and E.T. Laroe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. Office of Biological Services, U.S. Fish and Wildlife Service, FWS/OBS-79-31.
3. Gleason, H.A. and A. Conquist. 1991. Manual of Vascular Plants of Northeastern United States and Adjacent Canada. The New York Botanical Garden. Bronx, New York.
4. Harlow, William M. 1957. Trees of the Eastern and Central United States and Canada. Dover Publications, Inc., New York, New York.
5. Holmgren, N.H. 1998 Illustrated Companion to Gleason and Conquists Manual. The New York Botanical Garden. Bronx, New York.
6. Munsell Color. 1975. Munsell Soil Color Charts. Kollmorgan Corporation, Baltimore, Maryland.
7. Natural Resources Conservation Service. 1991. Soil Survey of Tioga County, Pennsylvania.
8. Natural Resources Conservation Service. 1998. Tioga County Hydric Soils List.
9. Newcomb, Lawrence. 1977. Newcomb's Wildflower Guide. Little, Brown and Company. Boston, Massachusetts.
10. Pennsylvania Department of Environmental Protection. 1995. Chapter 93. Water Quality Standards.
11. Pennsylvania Department of Environmental Protection. 1993. Pennsylvania Scenic Rivers Components.
12. Pennsylvania Fish and Boat Commission. 1995. Listing of Surveyed Streams Having Verified Trout Production.
13. Pennsylvania Fish and Boat Commission. 1998. Summary of Fishing Regulations and Laws.

14. Peterson, Roger Tory and Margaret McKeany. 1986. A Field Guide to Wildflowers. Northeastern/Northcentral North America. Houghton Mifflin Company, Boston, Massachusetts.
15. Petrides, George A. 1986. Trees and Shrubs. Houghton Mifflin Company. Boston, Massachusetts.
16. Reed, P.B., Jr. 1988. National list of plant species that occur in wetlands: Northeast Region. U.S. Fish and Wildlife Service, WELUT-86/W13C.
17. Roads, A.F. and W. Klein, Jr. 1993. The Vascular Flora of Pennsylvania: Annotated Checklist and Atlas. American Philosophical Society, Philadelphia, Pennsylvania.
18. Strausburg, P.D. and Earl Core. 1977. Flora of West Virginia. Second Edition. West Virginia University Books.
19. U.S. Army Corps of Engineers. 1987. Corps of Engineers Wetlands Delineation Manual. Waterways Experiment Station. Vicksburg, Mississippi.
20. United States Environmental Protection Agency (Plafkin). 1989. Rapid Bioassessment Protocols for Use in Streams and Rivers. Benthic Macroinvertebrates and Fish. EPA/440/4-89/001, Washington, DC.

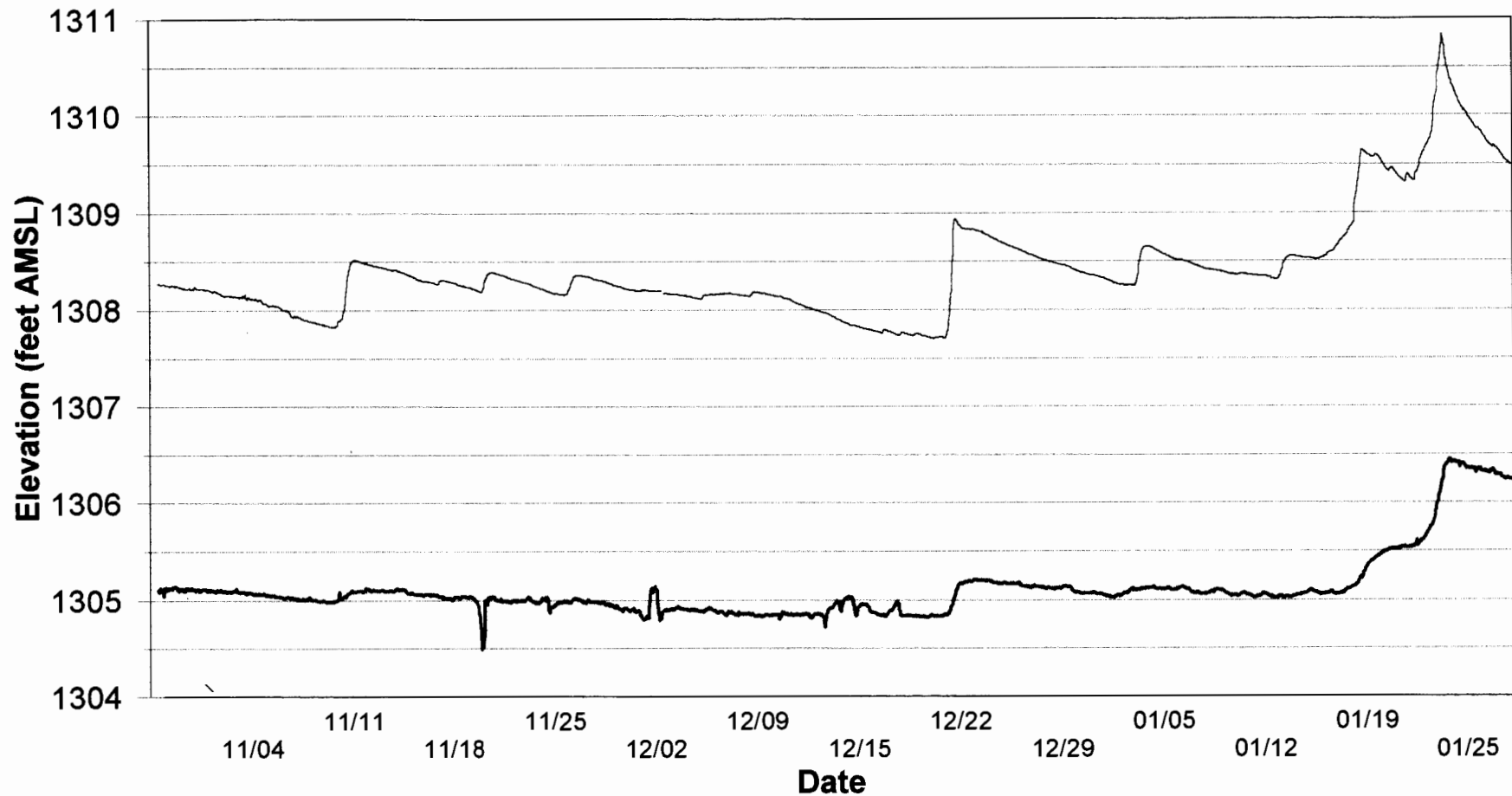
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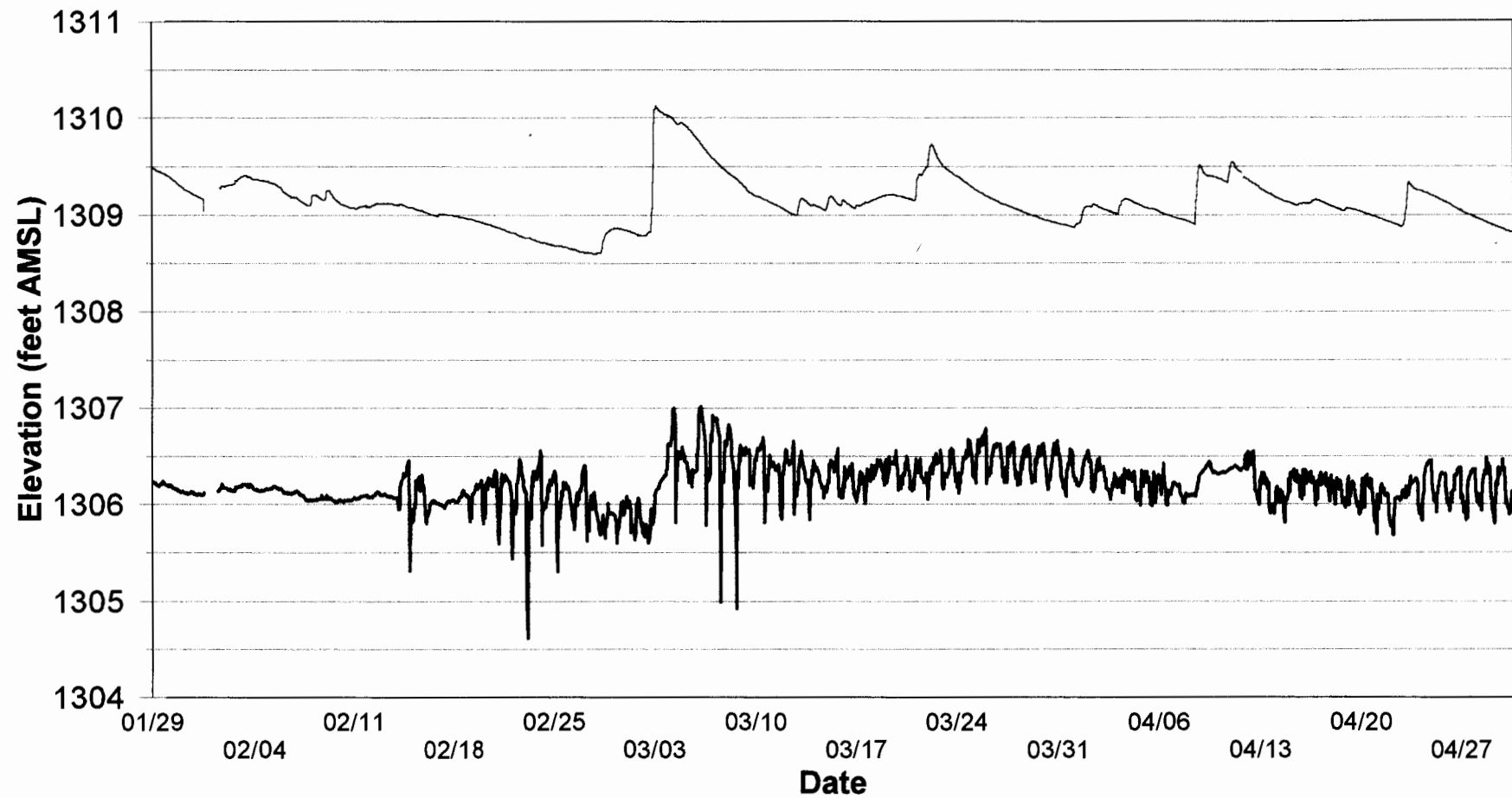
MW-2 / P-1 - Nov. 1998 thru Jan. 1999



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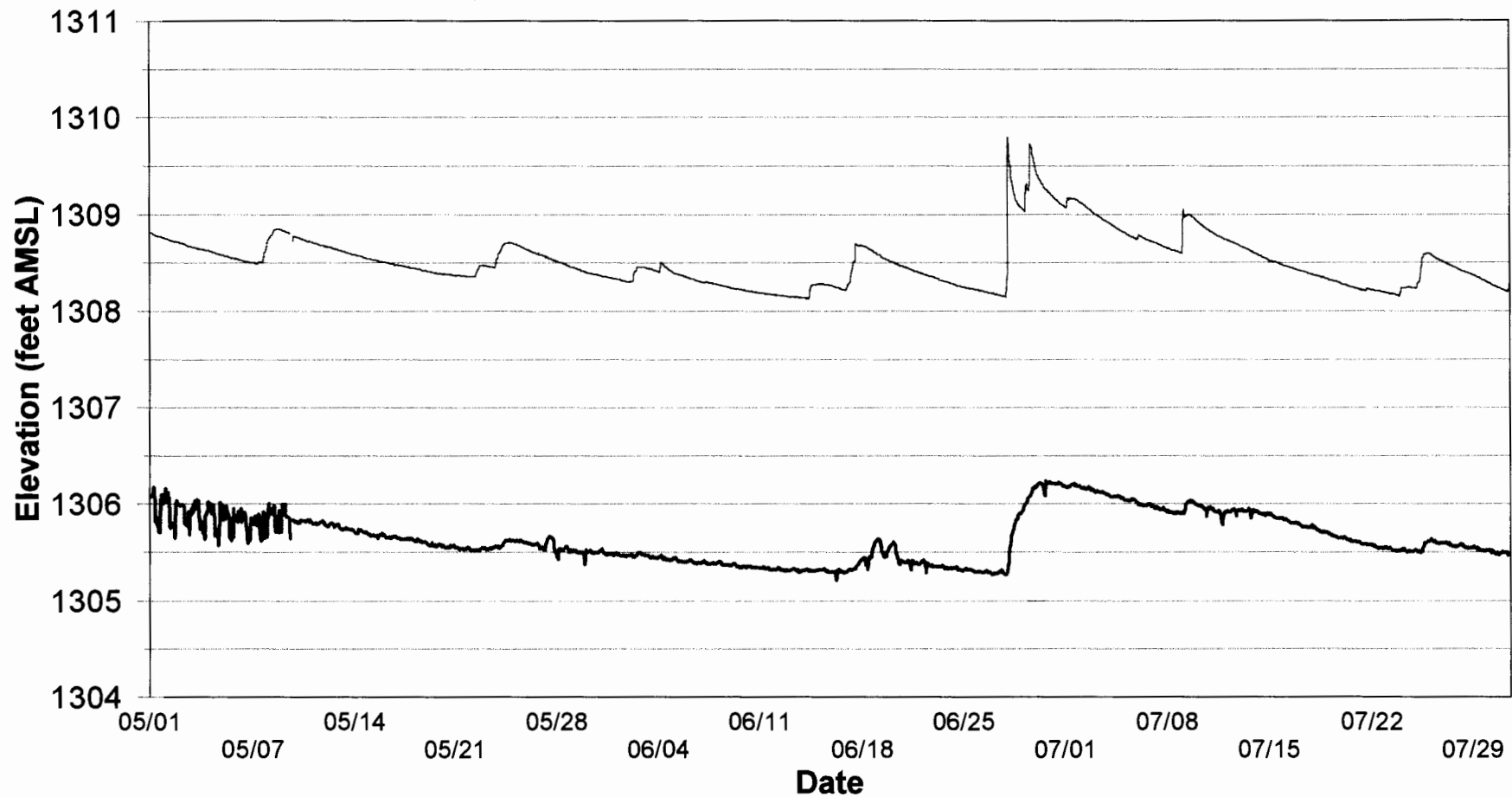
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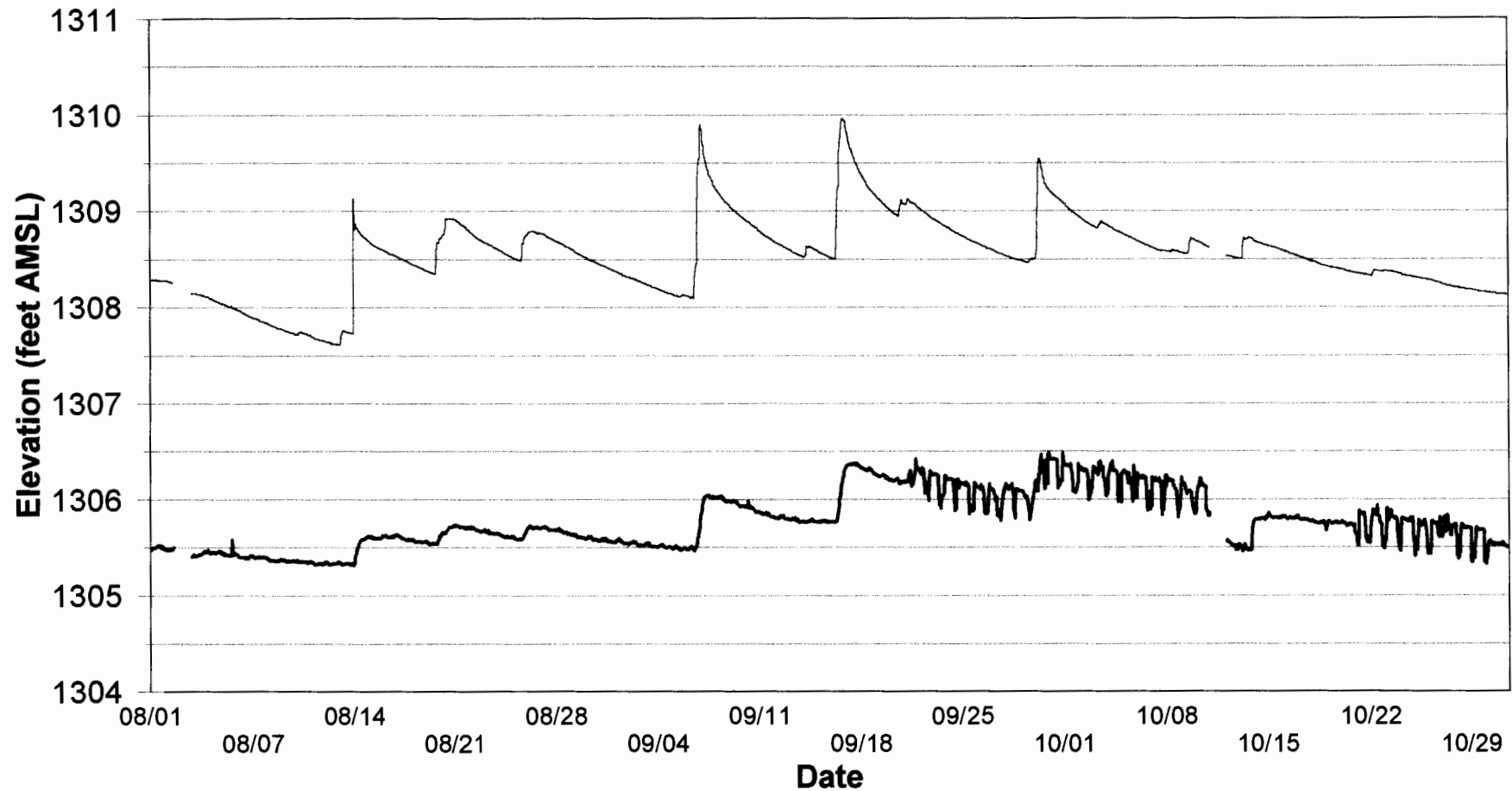
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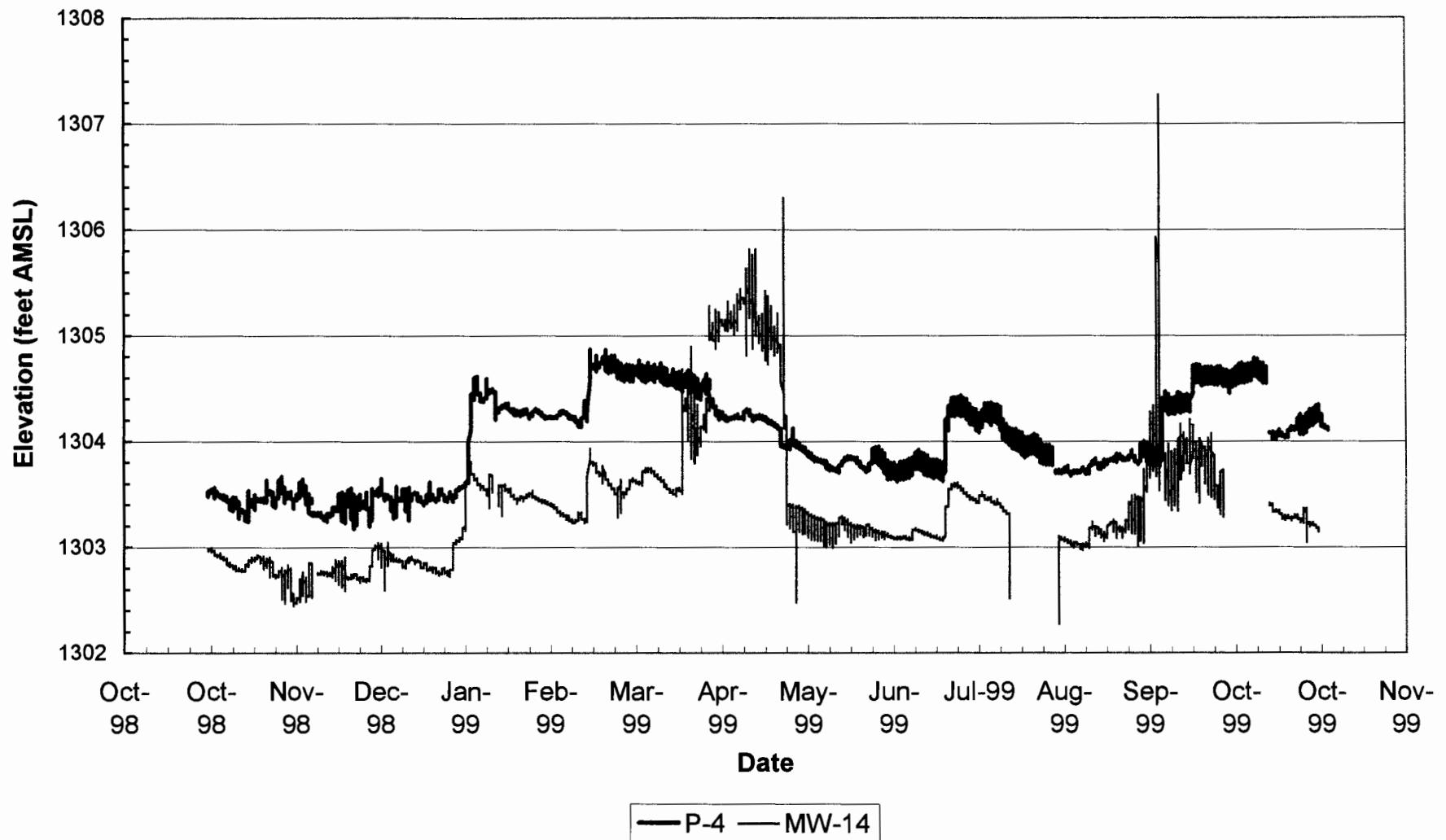
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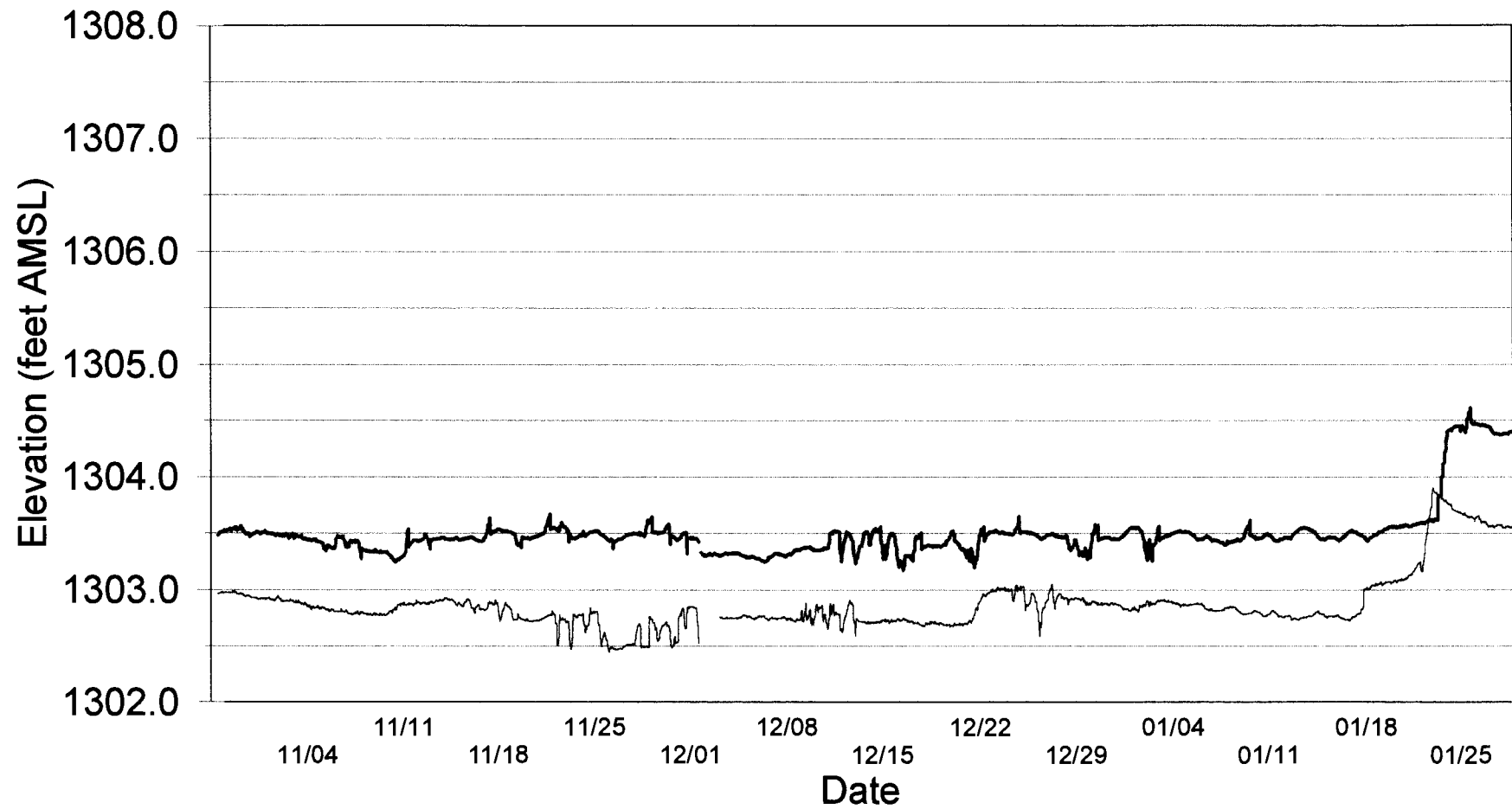
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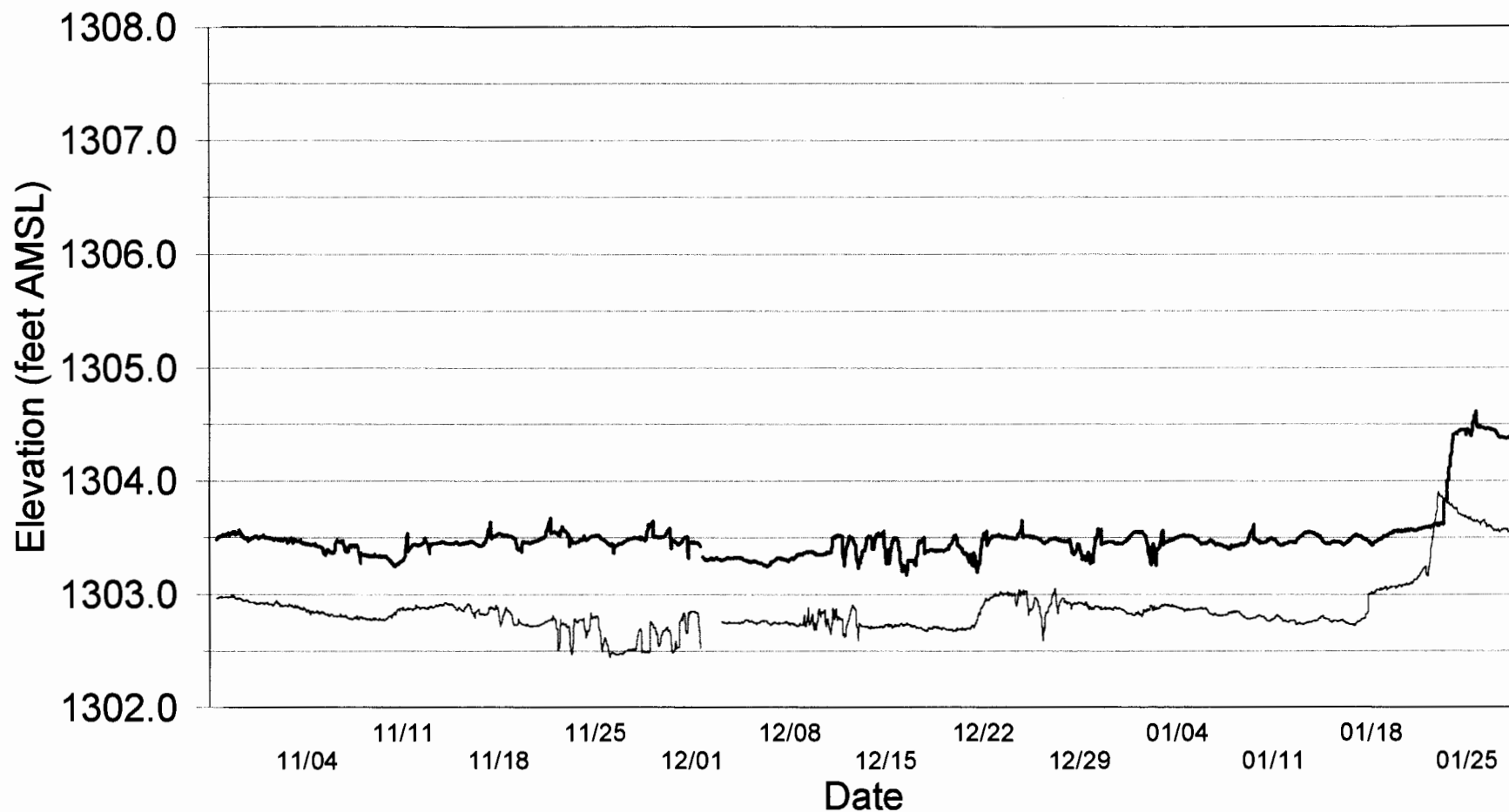
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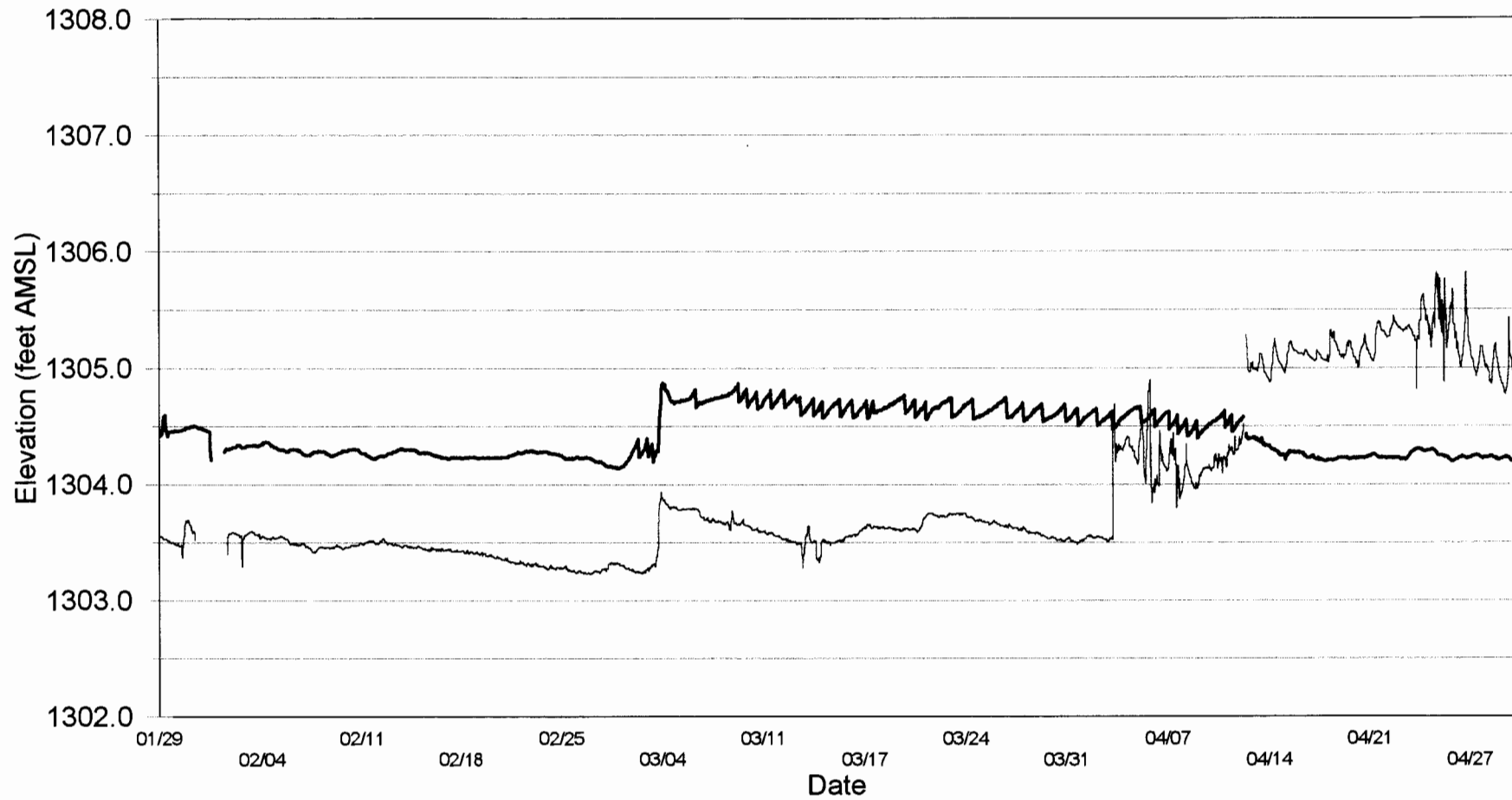
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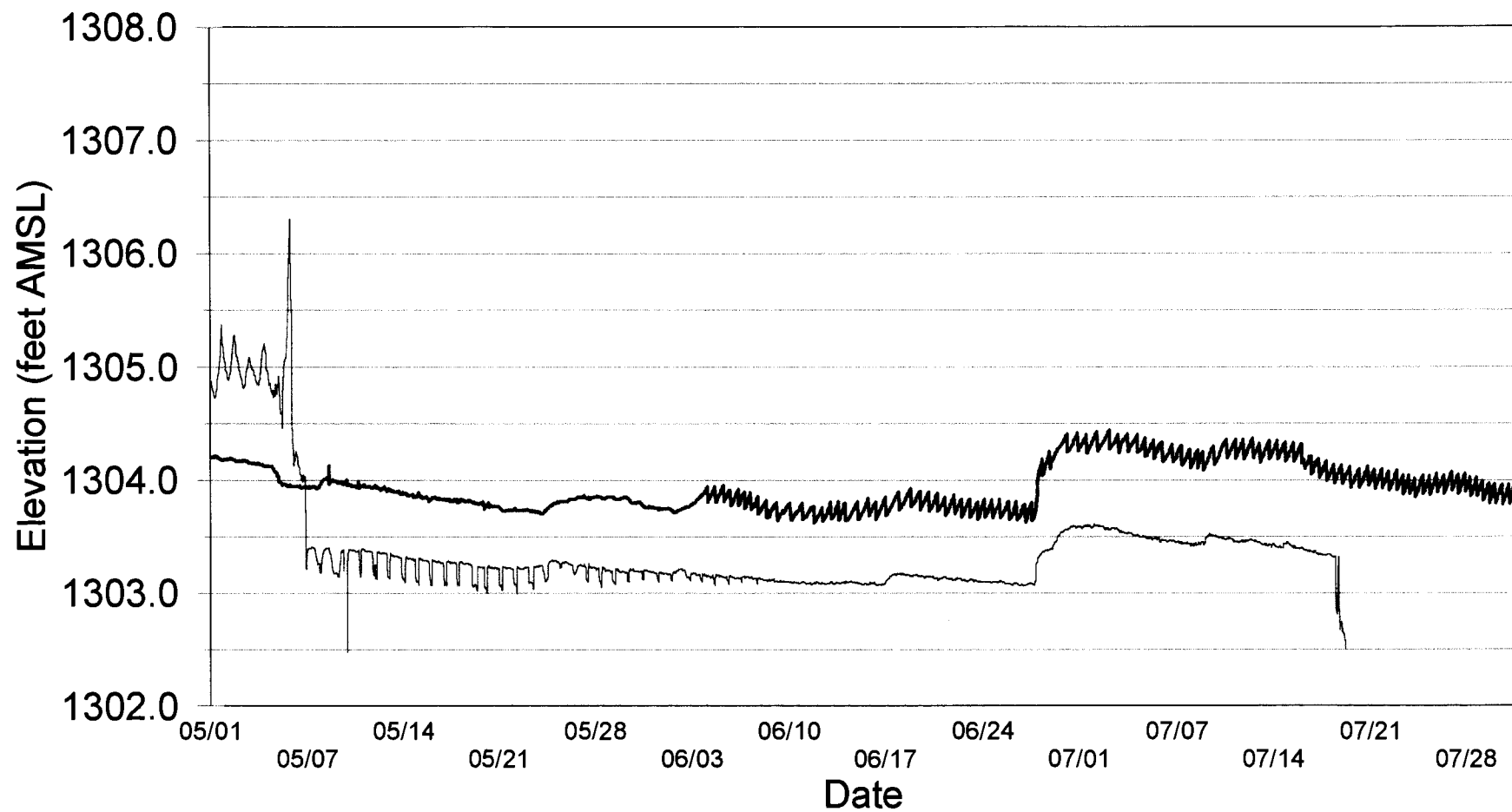
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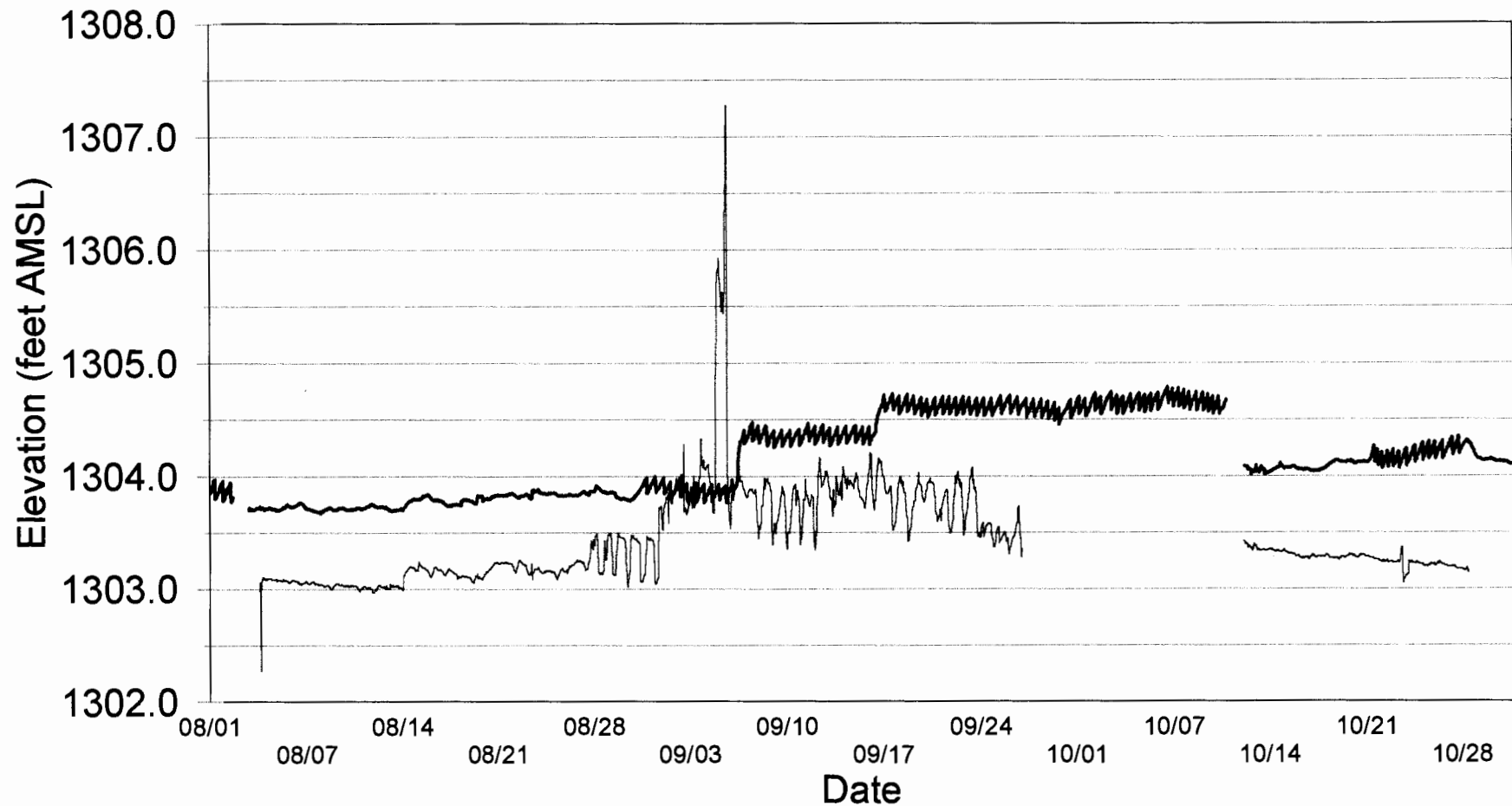
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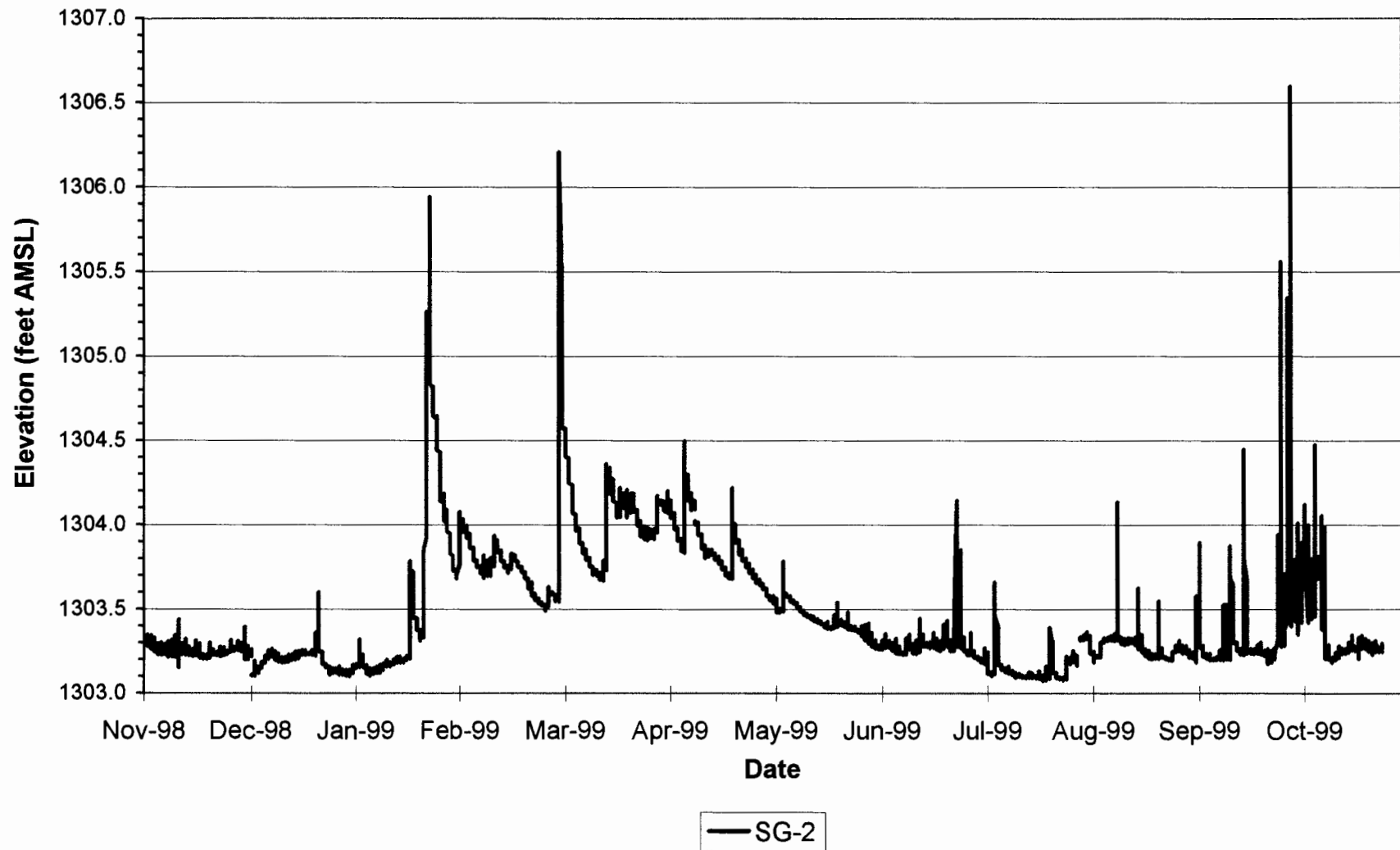
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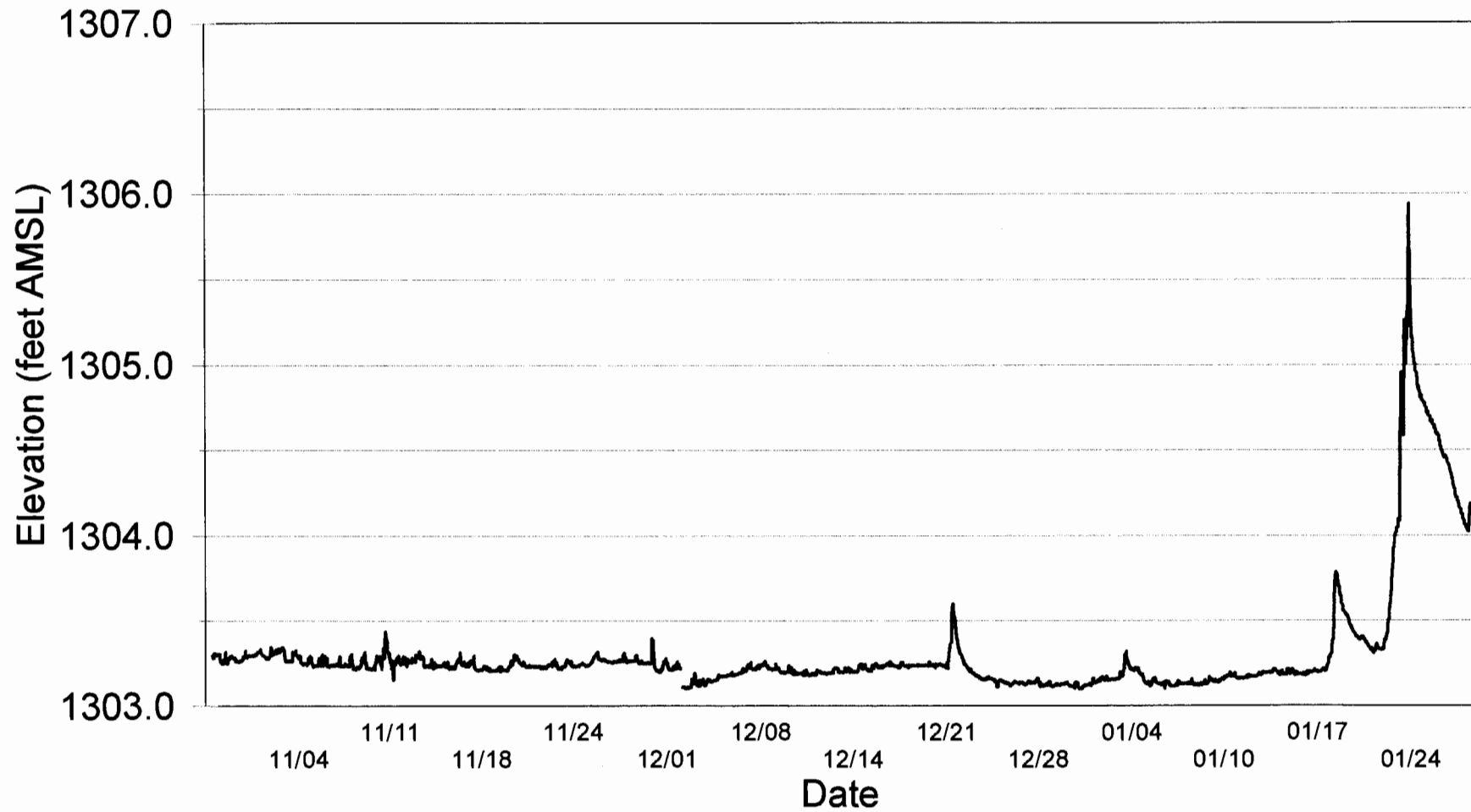
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Stream Gauge SG-2



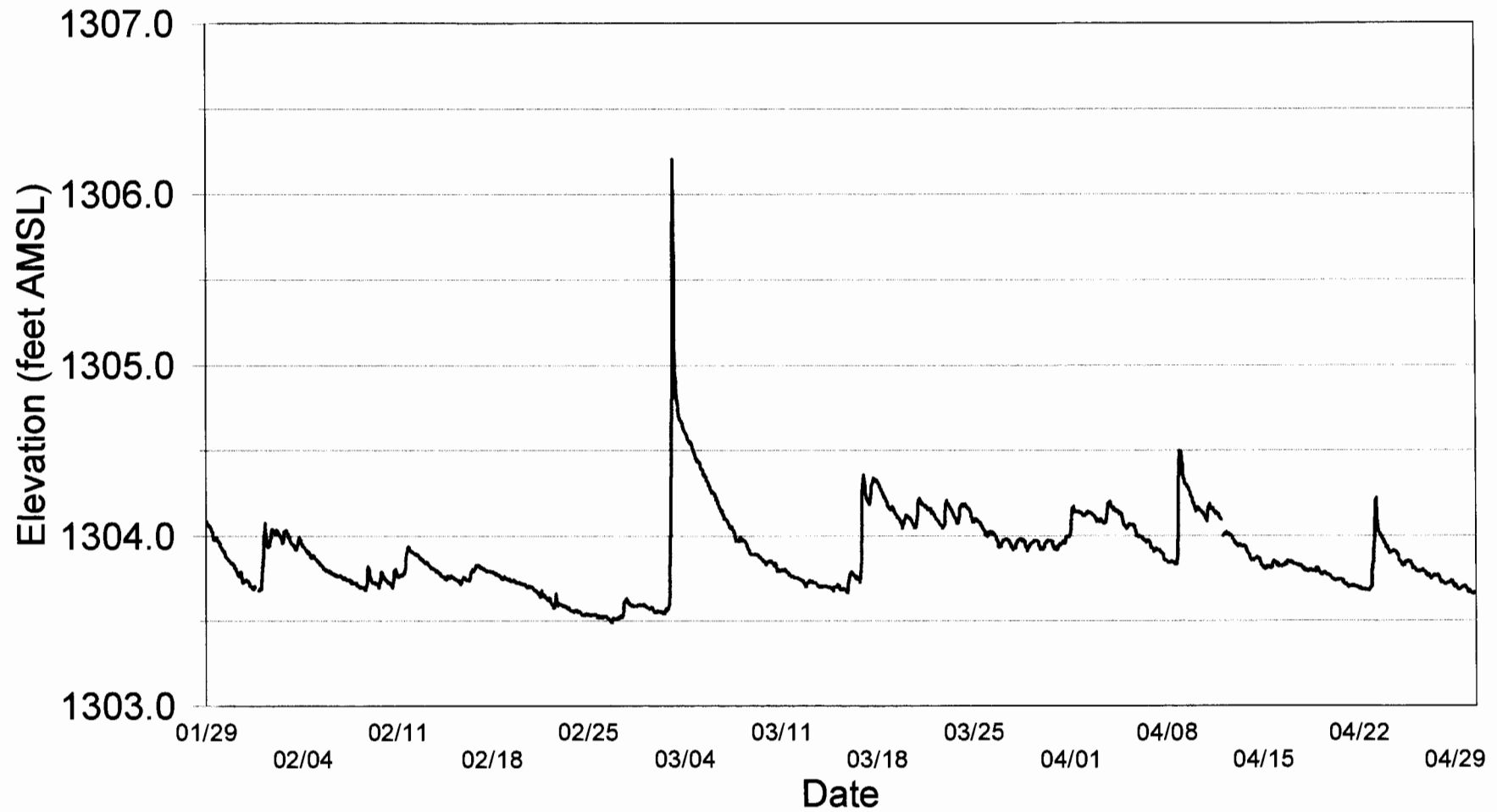
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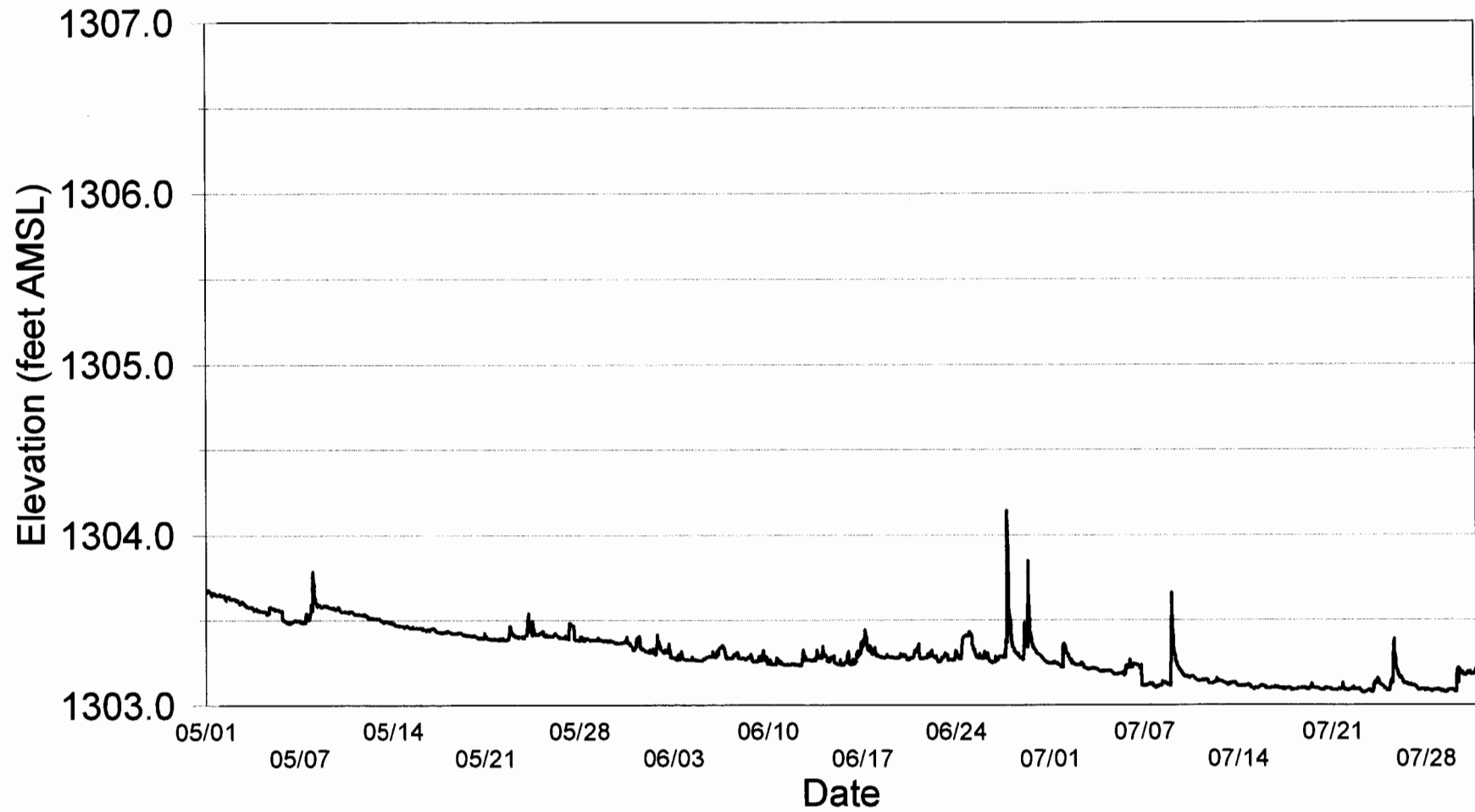
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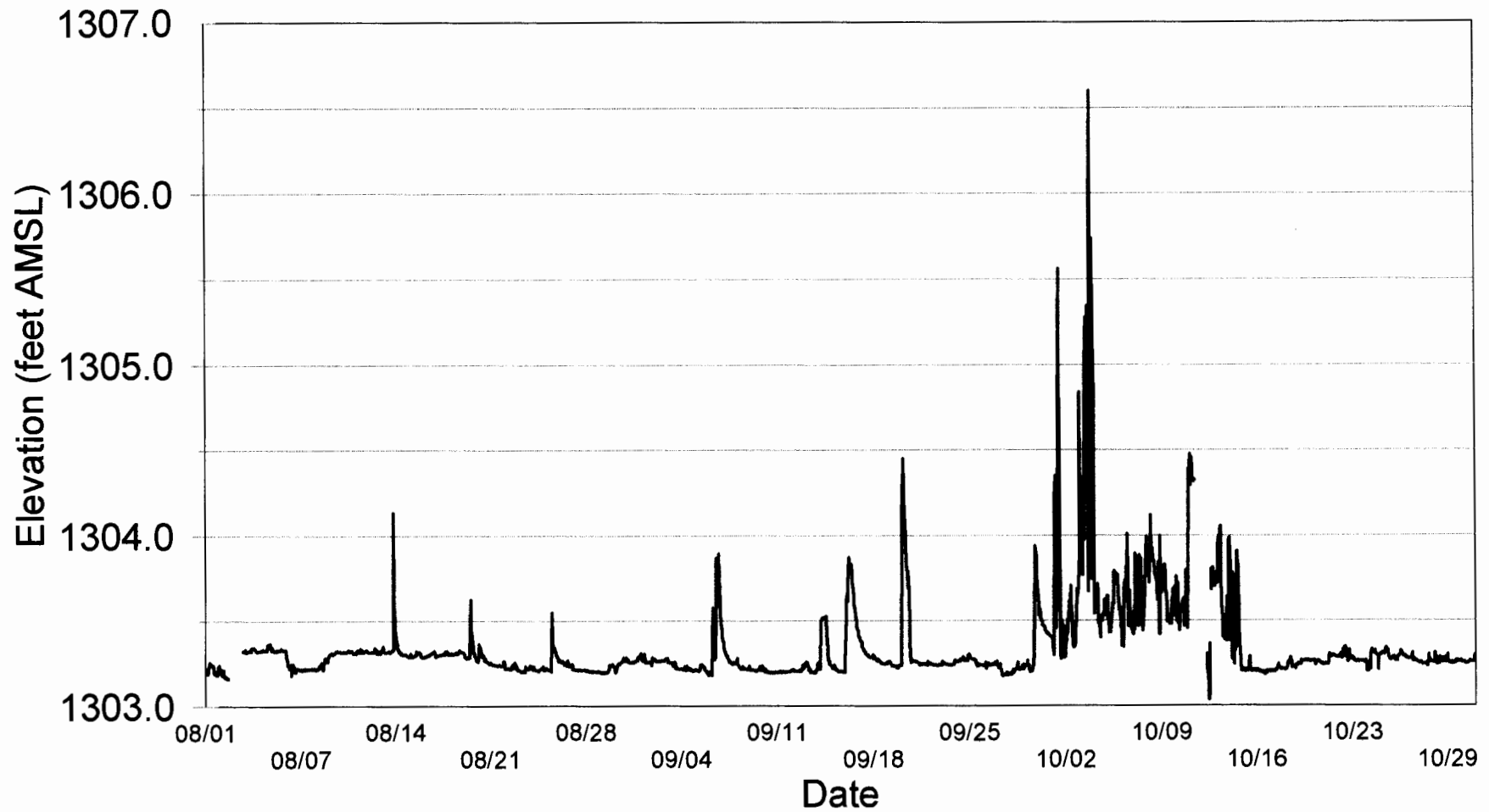
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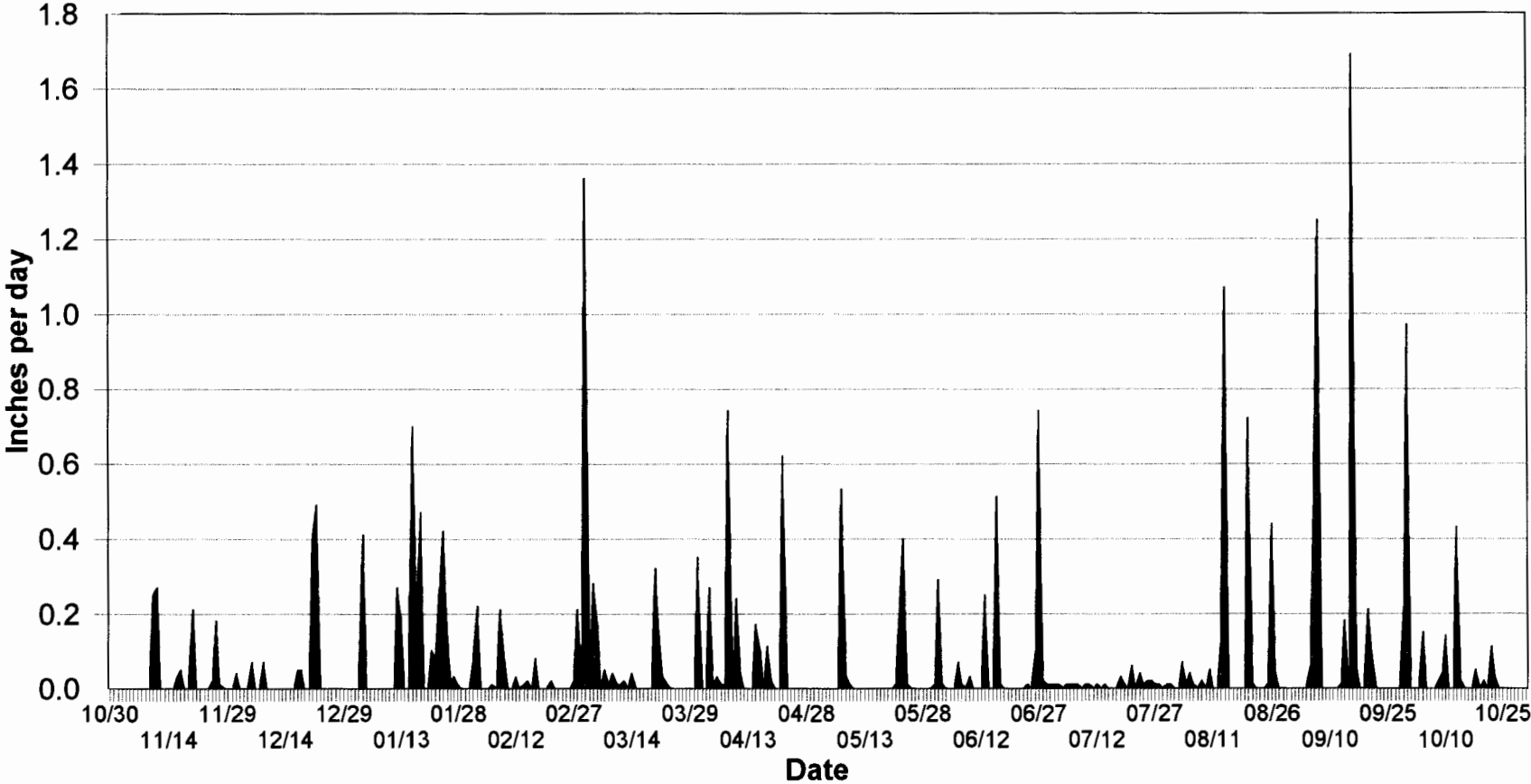


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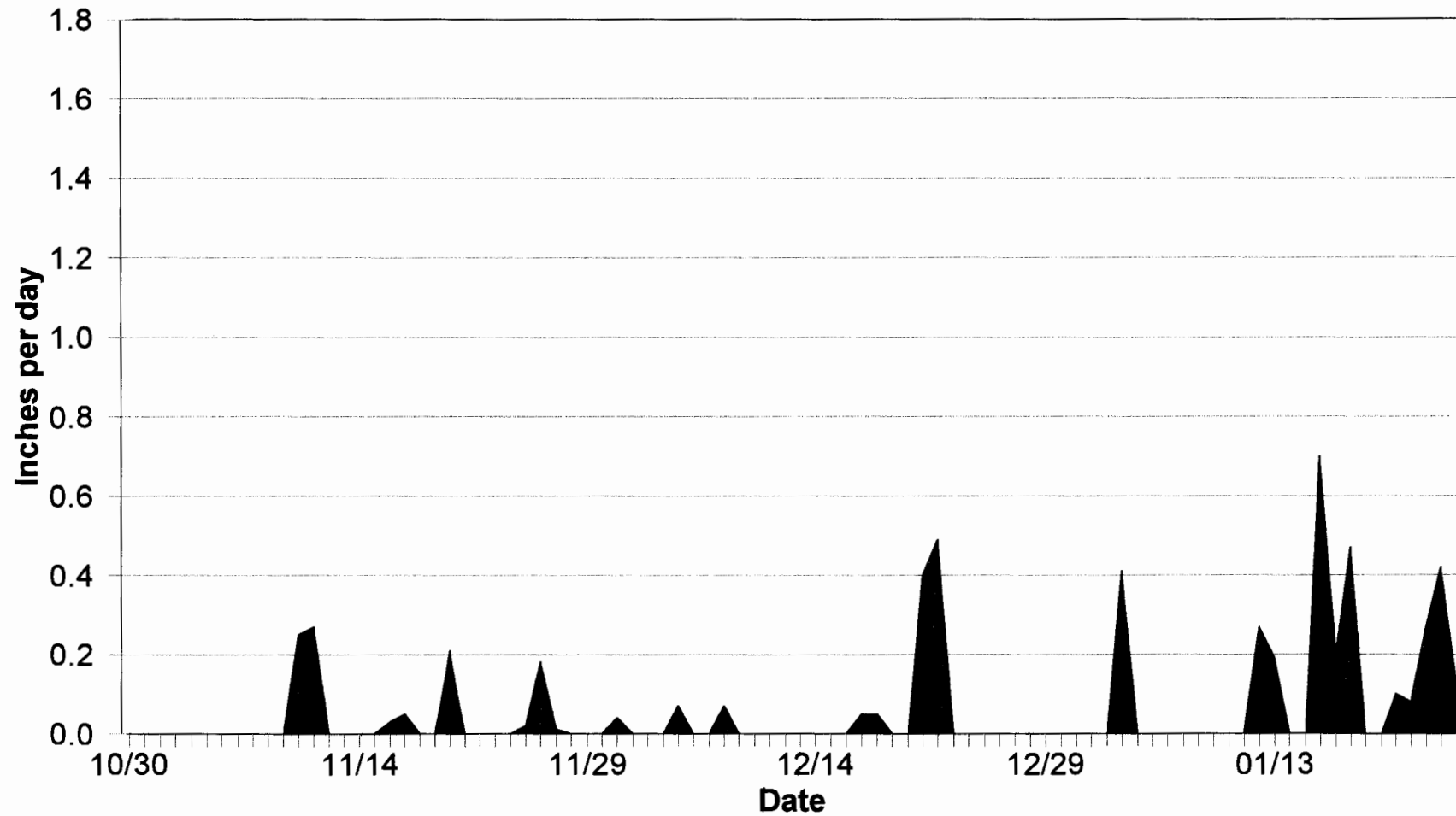


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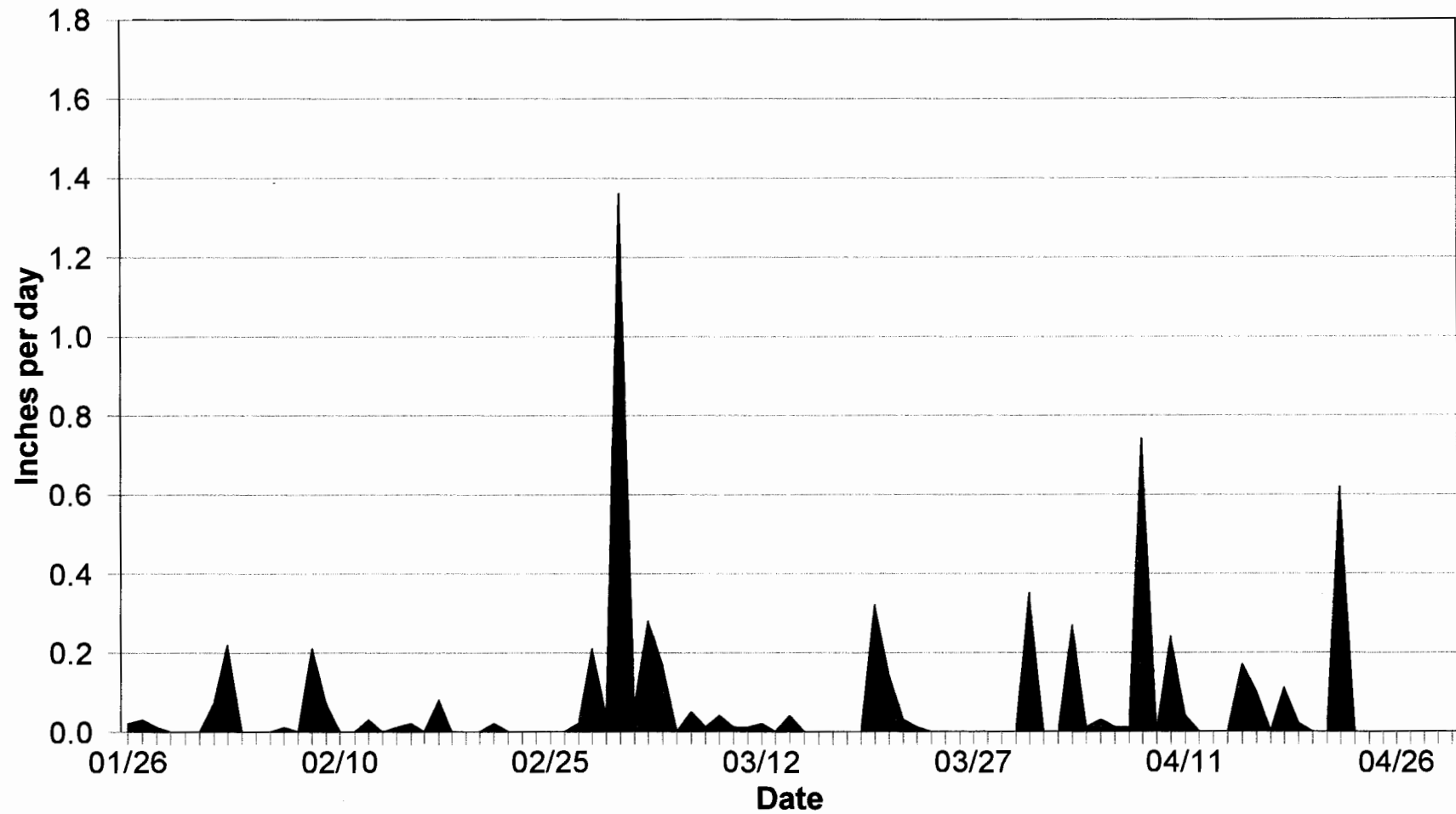
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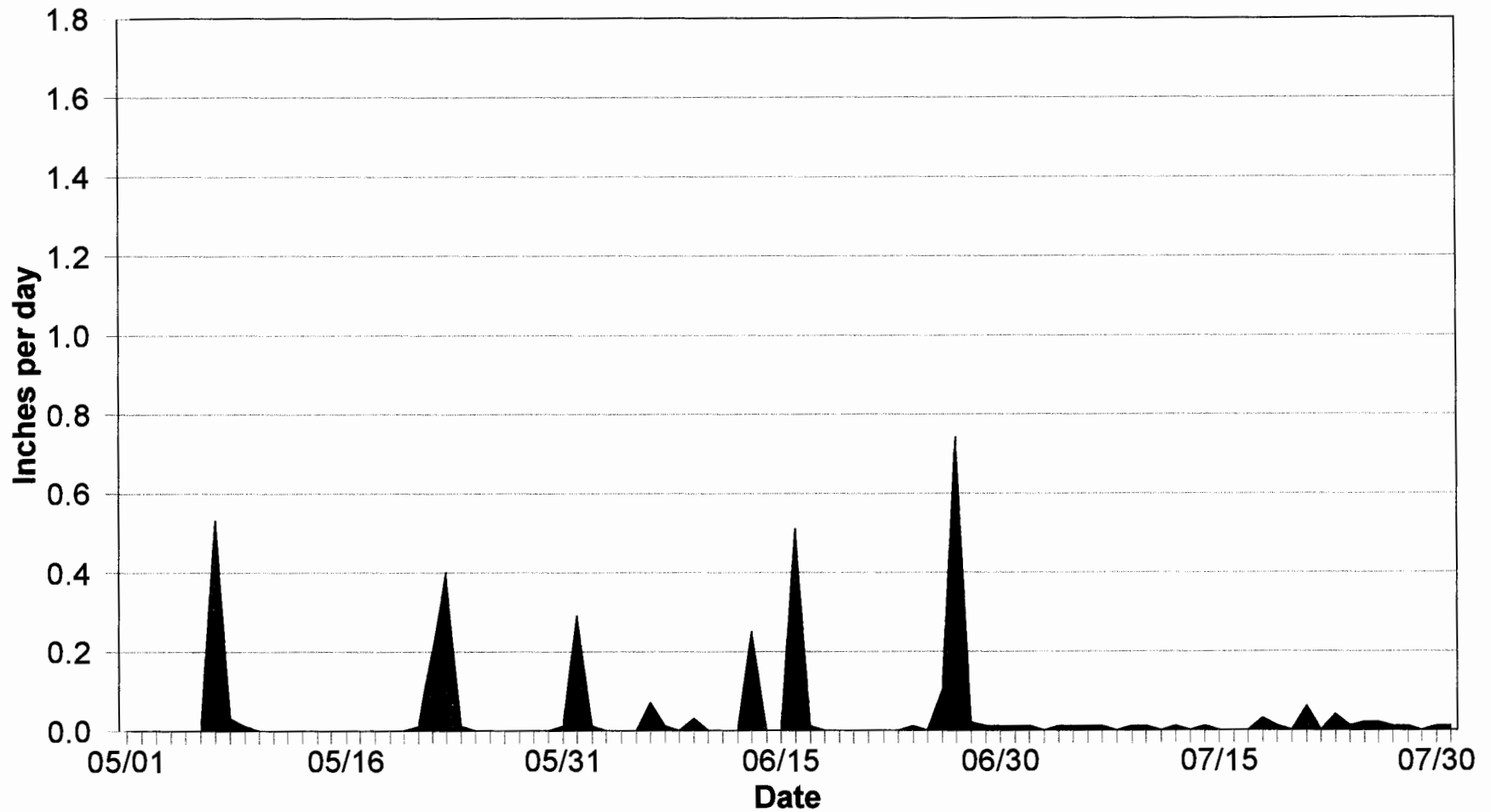
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